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ART. I.—SHEEP HUSBANDRY IN THE SOUTHERN STATES.

The celebrated, but eccentric John Randolph, "of Roanoke," whose eccentricity often got the better of his reason and logic, and led him into vehement and bitter denunciation of even the most grave and important measures, had, for some reason not very satisfactory, contracted a most bitter antipathy to sheep and the raising of wool. He even went so far once, on the floor of Congress, as to declare that he would go any time out of his way "to kick a sheep!" John Randolph, however, was but a man; and time has shown that all his prejudices against attempts at sheep husbandry, in the South, and particularly in his own state, Virginia, were groundless—founded in a want of knowledge of the capabilities of the South for this very important branch of rural economy.

Others, though not as renowned, but perhaps more free from prejudices, have also made the most sweeping denunciations of wool-growing in southern latitudes; and, undoubtedly, this opposition has contributed greatly to retard the progress of sheep husbandry in the South, by engendering in the minds of agriculturists deep prejudices against it, or, at least, doubts of its practicability and profit. These doubts, however, have been gradually disappearing, and for many years past there has not been a single southern state in which wool was not more or less raised. We have not the last census to quote, but that of 1840 will answer our purpose. According to that census, the quantity of wool raised in the states south of the Ohio and Potomac, and west of the Mississippi, was as follows:

Virginia	1,293,772	sheep	2,538,374	pounds of wool.
North Carolina	538,279	"	625,044	" "
South Carolina	232,981	"	299,170	" "
Georgia	267,107	"	371,303	" "
Florida	7,198	"	7,235	" "
Alabama	163,243	"	220.353	" "
Mississippi	128,367	"	175,196	" "
Louisiana	98,072	"	49,283	" "
Tennessee	741,593	"	1,060,332	" "
Kentucky	1,008,240	"	1,786,847	" "
Total	4,478,852		7,133,187	

Since 1840, sheep raising has made great progress in the South, and there is an increasing attention given to it. In many of the states, and particularly in Texas, since its admission into the Union, this is true. Many persons of capital, and of experience in sheep raising, have not only devoted much time, in Texas, by rearing the ordinary breeds of that state, but they have expended large sums in importing the finest breeds from the North. There is now* in New-Orleans, on board of a vessel just arrived from New-York, twenty-four full-blooded sheep, of the best Merino, on their way to Corpus Christi, to which place they are imported from Vermont, for the improvement of the Texas and Mexican breeds. The lot consists of eighteen bucks and six ewes, covered with magnificent fleeces of silky fineness. They cost about $8 per head in Vermont.

Of sheep in Texas, we can speak from personal observation. There is no country in the world where they thrive better, or with so little cost and trouble.

The progress of sheep husbandry in the South is not as rapid as it might, and undoubtedly would be, if more exact information on its great practicability and advantages was diffused among our agricultural population. There is much inquiry on the subject. Many old prejudices still linger, and such questions as the following are frequently asked:

1. What is the effect of climate on the health and wool-producing qualities of sheep in the South?
2. Is the soil, herbage, &c., of the southern states adapted to sheep husbandry?
3. What are the profits on sheep husbandry in the southern states?
4. Is there a constant market for wool, and what are the future prospects of it, as to demand and supply?
5. What are the most profitable breeds of sheep for the South?
6. How ought sheep to be managed in the South?

These questions we propose to answer as fully as our space will admit, for the benefit of such readers of the Review as take interest in the subject.

I. In regard to the effect of a southern climate on sheep, we will discuss this under two heads: the effect upon the health of sheep, as mere animals; and the effect on the quantity and quality of the wool.

That our southern climate is unfavorable to the health of sheep, is disproved by the experience of many years. All who will take the trouble to look into the history of sheep, in the old world, will see that it is an animal that has, from time immemorial, been bred on the eastern continent, from the equator to the snows of Scandinavia—from the burning plains of Asia and Africa to at least the 65th parallel of north latitude. The power which the sheep possesses of accommodating itself to different climates seems almost unlimited. It

* March 13, 1852.

seems to thrive equally well on the hot plains of Hindostan, or in the frozen regions of Thibet. We have observed it extensively in New-York, Massachusetts, and other states, and in the high, undulating regions of Texas; and in both regions it thrives equally well; if anything, better in the South than in the North. There are now not far from 100,000 sheep in Louisiana. South of the 32d parallel of latitude, it is estimated that there are, in the southern states, between two and three hundred thousand sheep at the present time, and the number is constantly increasing. By the table which we have given above, it will be seen that there were, in 1839, more than 4,400,000 sheep in the southern states. The fact that the animal is rapidly increasing in numbers in the South shows that the warmth of the climate is not unfavorable. We may regard it as a settled fact, that the climate of the South is highly favorable to the health of sheep. The animal thrives in even the most unhealthy localities of the South —along the low, fenny, tide-water region that skirts the Gulf of Mexico, on the margins of Great Okefinokee swamp, in Georgia and Florida, and in the swamps of the Mississippi. In the parish of Orleans there are some 2,000 sheep; in Jefferson, about 7,000; St. Mary's, 8,000. In all parts of the Delta they are found in large numbers; and that they are healthy in all this region is a matter of notoriety.

Let us now consider whether the quantity of wool, which a sheep produces, is less in the South than in the North. The following table will answer this query; it is compiled from the U. S. census for 1840:

				Av. weight.					Av. weight.
Wool, per sheep, in			Virginia	17¼ ozs.	Wool, per sheep, in			Mississippi	23¼ ozs.
"	"	"	N. Carolina	16 "	"	"	"	Louisiana	17¼ "
"	"	"	S. Carolina	19 "	"	"	"	Tennessee	18¾ "
"	"	"	Georgia	19¼ "	"	"	"	Kentucky	23¾ "
"	"	"	Florida	17¾ "	"	"	"	New-York	21 "
"	"	"	Alabama	17 "					

From this it would appear that the quantity of wool, per sheep, in the South, is greater than in the North. It must not be concealed, however, that the U. S. census for 1840 is far from being reliable; but as its defects affect the North as well as the South, it is as fair for the one as for the other. For all purposes, however, requiring exactness, it might as well not have been taken. We could easily verify this observation, but it would be a digression from our subject. It is a pity, that men, well paid by the government for making census returns, cannot do their work correctly.

In comparing wool-growing in the South with that of the North, we are to bear in mind, that in the South the business thus far has received but comparatively little systematic attention; while in the North wool-growing is as old as the republic itself, and has long since been reduced to a system, conducted upon the most scientific and expensive plans. Every attention there has been paid to the breeding of sheep, and importations of the best stock have, from time to time, been made from Europe; while in the South sheep have received little attention,

being suffered to breed promiscuously, and to roam through the forests without being regularly sheared.

"From all well-known facts," says Mr. Henry S. Randall, of New-York, a distinguished writer on sheep husbandry, "warmth of temperature, at least to a point equaling the highest mean temperature in the United States, is not injurious, but absolutely conducive to the production of wool. The causes of this are involved in no mystery. Warm climates afford more green and succulent herbage during a greater portion of the year than cold ones. Sheep, plentifully supplied with green herbage, keep in higher condition than when confined to that which is dry. High condition promotes those secretions which form the wool. Every one at all conversant with sheep well knows, that if kept fleshy the year round, they produce far more wool than if kept poor. A half a pound's difference per head is readily made in this way. Within the maximum and minimum of the product of the sheep or of a flock, the ratio of production always coincides with that of condition."*

Having thus shown the effect of climate upon the *quantity* of wool, we now proceed to consider its effect upon the *quality*.

There can be little doubt that the hair and fur of animals is finer in cold climates than in warm. The cause of this is, perhaps, not fully determined. Some writers attribute it to the effect of cold and heat in contracting or expanding the pores of the skin, supposing the size of the hair to be proportioned to the size of the pores. The pores, in cold climates they say, being greatly contracted by the cold, suffer only fine hairs to pass, the reverse being the case in warm climates. This is a theory which needs confirmation. Indeed, it would seem to be refuted by the fact, that many quadrupeds, especially those of cold climates, have two kinds of hair growing together, a long, coarse kind, forming their visible external covering; and a shorter, finer, and more abundant kind, lying concealed by the other, and close to the skin, called *fur*. If the cold has anything to do directly with the growth of the hair, why does it cause some to be fine and the rest coarse, on the same animal?

The chief difference between animals of hot and cold climates is, in respect to hair, that the latter have two kinds of natural covering, a coarse and a fine; while the animals of hot climates have only the coarse, the fine being unnecessary. The sheep of Bengal are coarse and hairy: but these have been found, on being transported to Port Jackson, in Australia, in the latitude of South Carolina, to lose all their hair, in the short time of three years, and to assume a fleece of wool.

Australia, too, furnishes evidence of the perfect adaptation of warm climates to the growth of wool. The exportation of wool from Australia, in 1843, amounted to 16,226,400 lbs.

That the quantity and quality of the wool is dependent, in a great measure, on the kind and amount of the food received by the animal, is attested by all of the most able writers on the subject. Mr.

* Randall's Sheep Husbandry in the South, p. 22.

Youatt, an eminent writer on sheep, says: that "pasture has a far greater influence on the fineness of the fleece" than climate. It is admitted, too, that a change of climate, from a cold to a hot region, does not necessarily produce coarse wool; but that such deterioration may be counteracted by careful management and selection in breeding. Long experience in all climes has established this. "The preservation of the Merino race," says M. Lasteyrie, "in its utmost purity at the Cape of Good Hope, in the marshes of Holland, and under the rigorous climate of Sweden, furnish an additional support to my unalterable principle, that fine wool sheep may be kept wherever intelligent breeders exist."

We might cite many eminent authorities to prove that wool may be grown in all its purity and fineness in warm climates. The wool of Australia, in latitude 33°, is pronounced superior in softness and fineness to the wool of Germany, in latitude 50° north. Mr. Mark R. Cockrill, a large sheep raiser in Madison county, Mississippi, who imported Saxon sheep in 1824, says: "I find no falling off in quality and quantity of their fleeces; on the contrary, I believe there is a little improvement. Their fleeces are a little more compact than formerly, hence more weight; and from our mild climate, the staple has become longer. I assert it to be a fact, that the latitude I am now in, Madison county, Mississippi, latitude 32° north, is better than any country north of it to grow wool, as the sheep can keep all the time grazing by sowing small grain. The wool of the fine Saxon sheep in this climate is softer and more cotton-like than any I have ever seen. The superiority of my wool I ascribe to our climate, and the provision for the sheep of succulent food the year round."

The authorities cited above prove the great point in question, namely, that southern latitudes are not incompatible with the growth of the best of wools; and that, in some respects, they have the advantage of cold latitudes, in furnishing flocks constantly with green pastures, and in there being none of the winter expenses of northern countries to defray.

II. *Is the soil, herbage, &c., of the southern states adapted to sheep husbandry?*

But little need be said on this question. All who are acquainted with the South know that even on our poorest lands there is ample food, or there can easily be made to be ample food, for vast flocks of sheep. Undoubtedly the poorest worn-out lands of the South could be made to furnish sufficient grass for sheep, and thus be rendered highly valuable. A moderate capital would stock them with the best breeds from the North, which, with proper attention, would yield annually a certain and unfailing crop of wool—a crop that would be exempt from the uncertainties of that of cotton. Lands now abandoned, or those of the low tide-water region covered with pines, could be made vastly productive and profitable in wool. They could be made to yield sufficient grass to feed thousands of sheep, that, with but little care to their owners, would yield their valuable fleeces. Nearly all of those lands in the South, now regard-

ed as nearly worthless, could be made to produce wool, at very little expense.

All of the most sterile lands of the South could be made to yield an abundance of the Bermuda grass, thus converting all abandoned fields into permanent pastures, that would support thousands of sheep, requiring but little attention, save the shearing of them. There is, therefore, no obstacle to the raising of sheep, in the South, arising from a want of suitable food. The whole tide-water zone of the South, extending from twenty to one hundred miles from the sea-coast, could be easily converted into a sheep-growing region.

III. *What are the profits on sheep husbandry in the southern states?*

In many, if not in most situations throughout the South, sheep will obtain sufficient food from the pastures, during the whole year, so that they are at no expense to the owner during winter for food or shelter. The items of expense, then, in the raising of sheep, would be, interest on the purchase money of lands and sheep to begin with, the expense of shearing and supervision, and the loss of sheep by death. On the other side of the account, we should have the value of the wool and the increase of the flock. Lands fit for sheep raising can be purchased at $1 25 per acre, and ordinary sheep are worth $2 per head. Wool is worth at present from 30 to 35 cents per pound. During the last 15 years the price has ranged between 30 and 50 cents. It is allowed that there may be three sheep to every acre of land. The increase of a flock is about 80 per cent, and lambs are worth 60 cents each. In the south the expense of supervision need not be anything, as old superannuated negroes could watch sheep. The shearing would cost not over $2 per hundred, if done by slaves.

From these data we construct the following statement:—

Dr.		*Cr.*	
100 Sheep, interest at 8 per cent. on the purchase money, at $2 per head	$16 00	By 300 lbs. of wool at 30 cents	$90 00
Interest on 33½ acres of land, at $1 25	3 33	Increase of 80 lambs, at 60 cents.	48 00
Expense of shearing	2 00	Total	$138 00
Loss by death, 2 per cent	4 00		25 33
Total	$25 33	Gain	$112 67

The above rates are put much lower than those given by others. It is estimated that the entire cost of raising a pound of wool, in the South, is not over 5 $\frac{1}{12}$ cents, but the market price of wool is not less than 30 cents. A very safe estimate of the cost of raising one pound is eight cents, as given by Henry S. Randall, Esq., in his very complete work on sheep husbandry in the South. It will be readily seen by the above that the profits of wool growing are infinitely greater than those of cotton, even at the present prices.

The expense of keeping sheep in the South is very little. The Hon. Mr. Coles, a member of Congress from Virginia, states, that his flock of 200 sheep, kept in good condition summer and winter, did not cost him $10 a year. Their wool, at 3 pounds per head, would be 600 lbs. worth at 30 cents, $180. In the official documents of the

U. S. Patent Office, for 1849, it is stated that the annual expense of keeping sheep in Texas does not exceed 25 cents per head.

The South is at present the only country in the Union where wool-growing can be made profitable. In the above-mentioned report of the patent office it is stated, that the keeping of sheep in New-York costs from $1 to $1 25 per head; in Ohio, $1 to $1 37; in New-Hampshire, $1; Vermont, $1; in Pennsylvania, $1. The keeping of 200 sheep, then, in Ohio, for instance, would cost $200 per annum; but these 200 sheep would only produce 600 lbs. of wool, which, at 30 cents, would be only $180. In the statement which we have given above, it will be seen, that in the South there would be a clear gain of $112 67 on 100 sheep, or $225 34 on 200. The great advantage which we derive from our southern climate will soon make ours the great wool-growing region, as it is now the great cotton and sugar-growing.

The gross cost of producing a pound of wool in the southern states, at the highest estimate we have seen, is eight cents; in New-York it is 27¼ cents. This great difference is owing to the greater cheapness of our lands, and of slave labor, and to the climate, which here enables the flocks to live in the fields the whole year, without any expense for food or shelter.

Thus far we have considered only the direct annual profit or loss of sheep husbandry in the South. Let us now look at some of the more remote, collateral, but equally certain advantages which the South would derive from this branch of husbandry.

It is well known that there are thousands and tens of thousands of acres of land in the tide-water and hilly regions of the southern states that have either become "worn out" by long cultivation, or are naturally too sterile for tillage. Can these "old fields," these deserted plantations, these sterile wastes, be reclaimed or made arable? Thousands are constantly deserting their old homes, their places of nativity, the fields upon which their eyes first rested, and which their hands first tilled, because they say that their lands are worn out, and they can live upon them no longer. Is there no remedy for this? Yes; the introduction of sheep husbandry. These worn-out lands yield enough to sustain large flocks of sheep, at least three to the acre. Upon 1,000 acres of these old lands 3,000 sheep can find subsistence; and while they do this, they are at the same time fertilizing them. How is this? The manure of the large flocks that might be placed upon them gradually enriches them, and thus increases their herbage. Thus, in a few years, poor and scanty pastures are converted into rich productive ones. The sowing of the fields with the Bermuda grass, too, which will flourish on almost perfectly barren soils, should commence with the introduction of the sheep, and one would help the other. The grass would be returned to the soil in the form of manure, and in a few years the old, worn-out, deserted fields, would be fit for the plow. "The Bermuda grass," says Mr. Affleck, "grows luxuriantly in every kind of soil. It possesses an additional advantage—that of binding the loosest and most barren sandy tracts." It spreads rapidly, is hard to eradicate, and is, besides, a favorite grass with animals.

It may be asked, why are sheep better for ameliorating worn-out lands than horned cattle? The answer is, because sheep will thrive on lands where other animals could not—where other animals could not get enough to eat. English agriculturists consider that the sheep on their lands are the chief support to their fertility—that they keep the fields fertile. They regard the *fleece* as the smallest part of the good to be derived from them. A writer in a London agricultural journal observes: "The *very fleece* shorn annually from their backs is worthy of consideration." Here, in America, the "very fleece" is everything.

The point to which we wish to call the attention of all engaged in agriculture in the South, is, that they should immediately stock all their old worn-out fields, if any such they have, with sheep. They will thus render those fields, in a few years, fit for the plow, and in the meantime be deriving a handsome profit from their flocks.

It being now shown that the South is the best country in the world for raising sheep, and that the profits of sheep husbandry are great, we shall proceed to consider

IV. *Whether there is a constant market for wool, and what are the future prospects of it as to demand and supply?*

Should the South go as extensively into the business of wool raising as is recommended, the quantity of wool produced annually in the United States would be enormously increased; and the question naturally arises: Would there be a market for all this wool? If only one-eighth part of the lands of the South was devoted to sheep, at the rate of two to the acre, and each furnished 3 lbs. a year, the South would annually produce more than 54,000,000 lbs. of wool, which, at 30 cents, would be worth $16,200,000. If the present supply of wool, taking the whole world into account, is adequate to the demand, it is evident that an increase of wool-growing in the South, unless it is diminished to the same extent in some other quarter, would soon create an overstocked market. We do not at all admit that the present supply of wool is equal to the demand. One thing is certain; the entire wool crop of the United States is nothing like sufficient to supply the demand in the United States alone. In 1850 we imported 18,000,000 lbs., worth, at 30 cents, $5,400,000. We exported, during the same year, wool to the amount of $22,778.

For several years past, the raising of wool in the Northern states has been diminishing, and at the same time the business has been increasing in the South. Northern wool-growers ascribe this phenomenon to the operation of the tariff of 1846; but the real cause is due to the facts which we have already pointed out, showing that the South is better adapted to wool raising than the North, in many parts of which, the expense of keeping ordinary sheep is more than the value of their wool. It is only the very best breeds, producing the finest wool, that can pay a profit in the North. A late writer on the subject states, that wools that do not bring less than 45 or 50 cents per pound, are the only ones that the North can raise with profit. In the South, as we have shown, a large profit can be made on even or-

dinary sheep, and that, too, with no trouble except the watching and shearing.

As sheep husbandry advances in the South, it will disappear in the North, so that we need not apprehend the want of a market for Southern wool. The South is destined to monopolize the business entirely in North America, and we can now raise it here at less expense than in any country in Europe. It will not be long before wool raising will be abandoned in this country, north of the 40th parallel of north latitude, if we except, perhaps, Oregon, where the isothermal line is at least 5° north of its course east of the Rocky Mountains.

Much has been said in favor of the prairies of the Northwest, as affording great facilities for sheep raising; but the experiment has been tried, and failed. These prairies are bleak, cold, barren wastes in winter, that afford no food for animals—and hence, sheep need as much housing and feeding there as east of the Alleghanies; besides, prairie lands devoted to sheep would need fencing, but they are destitute of timber, and there is also a great scarcity of water.

The wool-producing countries of the globe that are able to come at all in competition with us, are embraced chiefly in a belt or region about 15° in width, on each side of, and at different distances from, the equator. The position of this zone is governed by the temperature. The wool zone, if we may so call it, is bounded by isothermal instead of latitudinal lines. In the southern hemisphere, South America, Australia, and the Cape of Good Hope, are the only countries that might compete with us. In South America, the wool-growing region embraces about two-thirds of Buenos Ayres, all of Chili, the little country of Uruguay, which is about two-thirds the size of Texas, a mere point of Brazil, and the north part of Patagonia. The *pampas* of Buenos Ayres, like the prairies of North America, are covered with tall grass, and are destitute of timber. They present the same objections to sheep-raising as our prairies. The cost of transporting the wool to market is great, for there is none but a foreign market; and besides, the tariff of 1846 levies a duty of 30 per cent. *ad valorem*, without regard to quality; so that the lowest priced foreign wools cannot enter this country without paying a duty of about four cents on a pound, which is half what it costs to raise a pound in our southern states. Lands, it is true, are worth, in the Argentine Republic, only about ten cents an acre; but the instability of the government is a powerful discouragement to all branches of industry; the agricultural population is wanting in industry and skill; and foreign capitalists do not like to venture. The wools of Buenos Ayres cost there about 15 cents per pound, to which we must add commissions, United States duty, freight and insurance, which make the very coarse South American article cost here not far from 30 cents, at which price we can furnish wools of the same inferior quality, at a high profit. So that we have nothing to fear from South America. Let us now look at transatlantic competition.

England, Ireland and Scotland had, in 1839, 32,000,000 of sheep. England and Wales, with an area less than that of Virginia, had about 7,000,000 more sheep than the whole of the United States. But

the whole, or nearly the whole of the wool of Great Britain is consumed at home. It exports only its coarsest wools, and this because others are foolish enough to buy what English manufacturers think unfit for their use. England does not produce wool enough for its own manufacturers. In 1840 it imported 46,224,781 pounds. Much of the cheap, coarse, cast-off wools of England have been shipped to this country, and are included in the 18,000,000 pounds that we imported in 1850. As England has to import vast quantities of wool for her own consumption, we need not fear her competition.

Spain, and the whole of the Peninsula, once so famous for its wools, is now sunk to a fifth or sixth rate wool-producing country. Both in Spain and Portugal wool-growing has rapidly declined ever since 1810, and is still declining. Portugal then yielded more than 3,000,000 lbs. annually; now only about 350,000 lbs. Spain, in 1810, yielded nearly 6,000,000 lbs.; now only about 1,000,000 lbs. annually. Germany and Prussia have reached their climax, as wool-growing countries, and for the last 20 years have been declining.

France finds it better economy to cultivate grain, vines, fruits and silk, than wool in those of her departments adapted to sheep husbandry; and since 1825, her exports of wool to England have declined from 436,000 to 48,000 lbs.

Of Italy, we may say, that there is not the remotest prospect of her ever becoming a wool-growing and exporting country.

Turkey, though tolerably well adapted to sheep husbandry, exports but little wool. The proud, indolent Turk spurns all rural labor, is destitute of enterprise, and, moreover, his government affords him no encouragement. Destitute of any security to person or property, which is liable to be seized at any time, or which he is often compelled to sell at forced sales to meet oppressive taxation, the Turk has little inducement to increase his flocks.

Of the Cape of Good Hope, as a wool-growing country, nothing very favorable can be said. Nearly seven-tenths of the colonial territories are destitute of vegetation during a greater part of the year, according to Mr. Barrow. If we may believe the accounts of the Rev. Robert Moffat, who resided at the Cape 23 years, as agent of the London Missionary Society, the greater part of the country is doomed to perpetual sterility and drouth. Besides, lions, tigers, hyenas, jackals, wild dogs, &c., are so numerous and ravenous that sheep must be incessantly watched. But the worst of all, the sheep destroyers are the natives themselves, whose ravages are incessant. At the present time, especially, in the war which they are now carrying on with the English, their ravages of sheep, and cattle of all kinds, are very extensive. But, even if the English should succeed in effectually subduing the natives, the character of the country must ever render it unfit for wool-growing. Extreme drouth, says Mr. Moffat, continues for years together.

Of all the wool-growing countries of the Eastern hemisphere, south of the equator, Australia ranks first. It has an area about equal to that of the United States, but greatly inferior to it in fertility of soil. "The truth is," says Mr. McCulloch, "that the bad land bears a much

greater proportion to the good, in New-Holland, than in almost any other country with which we are acquainted." The country is peculiarly subject to drouths, which continue two, three, and four years together, destroying all vegetation. The drouth in 1841 destroyed 70,000 sheep.

It is difficult to find a place in Australia where sheep do well. Disease there, among sheep, too, appears to be peculiarly inveterate, causing frightful losses. The astringency of the water and other causes, produce severe epidemics. In some years they carry off half the flocks, in some regions. The shepherds being *convicts*, have often, through spite to their masters, caused whole flocks to be infested with the *scab*, by driving them into contact with diseased flocks. The chief source of the wealth of Australia is thus in the hands of these worthless convicts.

The sheep of Australia are subject to the depredations of various animals, particularly the wild dog; but the *runaway convicts*, with whom the country is filled, are a worse enemy than the dogs. They live upon the flocks. Sheep there have to be folded every night, and guarded by watchmen and dogs, with fires, to keep off wild beasts. Mr. Samuel Lawrence says, in one of his letters to Mr. Randall: "I saw a gentleman from England, a few months since, who has an admirable flock in New South Wales, of 25,000 sheep; and he assured me that he had not received a penny of income from them since 1838."*

With such a picture before us of wool-growing in Australia, and the fact that it is 13,000 miles from any market for wool, we have not much to fear from Australia.

From a consideration of all the foregoing facts, Mr. H. S. Randall, in his work on Sheep Husbandry, draws the following conclusions:

1. "That wool-growing is never likely to permanently and importantly increase in any of the countries of Europe, unless it be in Hungary, Turkey, and the south of Russia.

2. "That it is more likely to decrease than increase in Great Britain, France, Portugal, and Italy.

3. "That such a decrease is next to certain in Spain and Germany, (including Prussia and Austria,) excepting Hungary and Transylvania; that the decrease will be much more considerable in Germany; that its rapidity and extent will be proportioned to the rapidity and

* The recent discovery of gold in Australia has been followed by an extensive abandonment of the sheep culture in that country, and vast numbers of sheep have been already exterminated. The London Times has an elaborate article on the subject, calling upon the government to take measures for averting the further destruction of sheep in Australia. The prospects offered by the mines cause the shepherds to abandon their business, which is very poorly paid, as an Australian shepherd gets less than $100 per annum for his services. It is proposed to raise their wages to keep them from running to the mines.

Another English journal, speaking of the abandonment of the flocks in Australia by the shepherds, says: "Immense flocks, left by the shepherds to be devoured by wild dogs, are being killed by thousands, and boiled down for tallow. Many proprietors, it is stated, have been compelled to dispose of 20,000 sheep in this way. As wool has hitherto been the great staple of the colony, the main reliance of the majority of settlers, and an article on which merchants have been accustomed to make large advances, there are not wanting writers who draw gloomy pictures of the ruin which will, in their judgment, follow this infraction of the ordinary course of affairs."

extent with which the market is supplied from countries which can grow wool cheaper, such as North and South America, Hungary, Southern Russia and Australia.

4. "That wool-growing will undoubtedly largely increase in Hungary and Southern Russia, and that it *ought to* in European and Asiatic Turkey, but will not extensively, until the character of the people and their political institutions are changed.*

5. "That it will also increase at the Cape of Good Hope, Australia, and Van Dieman's Land; but that its economical extension in either of these countries is limited, especially if America becomes a competitor.

6. "That no part of the Eastern continent, or its islands, all things considered, possess equal advantages for wool-growing with some parts of the United States."

The climate of our southern states, for sheep, is not excelled by that of any country; our soil is generally more fertile; we have an abundance of good water, and no long drouths; we have no localities too unhealthy for sheep; and we are four times nearer the European market than Australia. It is certain that if we raised more wool than necessary to supply our own market, we could export it at a fair profit. This is true even of the wool of the northern states.

Since the southern states, as we have shown, can produce wool for *one-third* the cost of northern wool, they could drive all the European nations from the market, with two or three exceptions, and with these they could successfully compete. So that there is no good reason why the South should not immediately embark in the production of wool.

What are the prospects of an increased demand for wool in Europe? Tables of importation show that there has been an increasing demand for wool in Europe ever since the commencement of the present century. In 1771, England imported only 1,829,772 lbs.; in 1810, 10,914,137; in 1825, 43,795,281; in 1840, 52,000,000. The same increased demand for wool has taken place in this country. There is an increasing demand for wool as well as for cotton throughout the civilized world, and this demand will keep pace with the progress of civilization, which incessantly increases our wants.

Our own country already affords a market for 18,000,000 lbs. more of wool than we produce. If our population continues to increase as heretofore, in ten years from this time there will be a demand in the United States alone for at least 137,000,000 lbs. of wool annually.

From the preceding facts it would appear, that the future prospects of the wool market are sufficient to justify very extensive operations in sheep husbandry. We now proceed to consider—

V. *What are the most profitable breeds of sheep for the South?*

This question is discussed at great length by Mr. Randall. He decides that the pure-blooded Merino is, all things considered, the best adapted to the South—it being a hardy breed, requiring no extra skill or experience for its management. Besides, the Merino makes a bet-

* That this will not be soon, needs no prophet to tell.

ter cross than the Saxon with the common sheep of the South. Two or three proper Merino crosses with the common sheep of the South raises them to the rank of a first-rate wool-growing sheep, scarcely inferior to the full-blooded Merino. The Saxon makes an indifferent cross, shortening the wool without adding much to its thickness, and thus rendering the fleece lighter. The reverse of this is the result of a Merino cross.

As a guide in the selection of Merinos, Mr. Randall says: "The head should be well carried up, and in the ewe hornless. It would be better to have the ram also hornless. The face should be rather short, broad between the eyes, the nose pointed, and in the ewe fine and free from wrinkles. The eyes should be bright, moderately prominent, and gentle in expression. The neck should be straight, short, round, and stout, not sinking below the level of the back. The points of the shoulder should not be raised above the level of the back. The back to the hips should be straight, the portion immediately back of the shoulder-blades being full; the ribs well arched; the body large and capacious; the flank well let down; hind quarters full and round, the flesh meeting well down between the thighs. The bosom should be broad and full; the legs short, well apart, and perpendicular when the sheep is standing. The skin should be loose, mellow, and of a delicate pink color. A colorless, tawny skin, indicates bad breeding."

Almost every species of sheep is to be found in the United States; but after a careful review of all their different qualities and adaptations to the South, as given by the most competent judges, we do not hesitate to say, that the Merinos are the best for crossing with our common sheep. We might add many pages in confirmation of this opinion. The opinion has prevailed, that the raising of coarse wools is more profitable than the raising of fine; but the reverse we believe to be true. The greatest wool market is that of England, and her chief importations consist of fine wools. If we had fine wools to send to England, we could successfully compete with those countries which now send their fine wools there. England does not want coarse wools, for these she exports herself.

The more we reflect on the subject of sheep husbandry in the South, the more are we convinced of its immense importance here, as a profitable branch of rural economy. A little capital invested in this branch of business would yield a hundred per cent. profit, and that too with but little trouble. All large planters could, with little additional expense, shear annually 1,000 sheep, and at the same time be improving their old lands. The subject is, at least, worthy of serious consideration

ART. II.—FOREST LIFE AND FOREST TREES.*

THE PINE—OAK—MAPLE—MAPLE SUGAR—LUMBER BUSINESS OF MAINE, AND ITS PROFITS—LUMBER BUSINESS IN LOUISIANA, &C.

To those who take but little interest in the every day life and duties of the laboring classes, it would seem preposterous to undertake to compose a book, and a readable book, too, upon the trees and lumber, the logs and rafts of the hardy woodsmen. But such a book has been written, and lies upon the table before us, and will furnish the materials for a sketch which we design to present to the reader.

The oak has in all ages occupied a prominent position amongst forest trees for its grandeur and stateliness, for the density and amplitude of its shade, the toughness and durability of its wood, for the nutriment afforded by its acorns for the rearing and fattening of stock, particularly swine, and the multifarious uses to which the timber is applied in building, furniture, fencing, &c. In some countries, especially Spain, the flesh of swine fattened on the acorns is esteemed a delicacy, particularly the *hams*, which some consider superior to the Westphalian, or Cincinnati sugar-cured. We southerners, however, dissent from this, as the flesh of our hogs, (perhaps a little rebellious, or too democratic, or hot-blooded,) when acorn-fed, assumes an *oak*-like toughness and fibrous density, almost defying the masticating powers of ordinary grinders. And although, as is stated in Mr. Springer's book, the oak-forests of England were once particularly "valued according to the number of hogs they could fatten, and considered one of the most valuable kinds of property," still we prefer to take our hogs out of "the range," and feed them on corn and peas at least a month before slaughtering them. The skin also becomes very tough, and no matter how much it is cooked, still it is almost inedible.

"What is one man's food is another man's poison;" and although hogs will fatten on acorns they are seriously detrimental to cows, yet they are very fond of them and partake of them greedily, hunting diligently for them in the proper season.

During the last year, 1851, there prevailed an epidemic amongst the oaks of this state and Mississippi, which destroyed thousands of all kinds, and in different kinds of soil. Our oaks seldom exceed one hundred feet in height, and throw out branches low down, unless crowded by other trees, or dense cane-brakes, when, sometimes, there is a clean shaft of forty and fifty feet.

Passing by other trees, we shall next come to the *Maple*, and of this "there are ten species in the United States," and amongst these "the rock maple is in all respects the most remarkable tree of the family." This is what is most generally known as the sugar maple, some few of which are to be found along the streams in the pine wood portions of this state, although no attention has been bestowed

* Forest Life and Forest Trees, by J. S. Springer.

on them for their saccharine properties, as they are entirely *overshadowed* by the sugar *cane*.

"In Massachusetts, between five and six hundred thousand pounds of sugar are annually made from the juice of the rock maple, valued at about eight cents a pound, yielding about forty-four to fifty thousand dollars per annum. It is perfectly easy to make maple sugar as white as the best double-refined loaf-sugar of commerce. It would, however, lose its peculiar acid flavor which now distinguishes it from ordinary cane sugar."

Our author here quotes from Dr. Jackson, of Maine—"Were it generally known how productive are the groves of sugar maples, we should be more careful, and not exterminate them from the forest as is too frequently done. Maple trees may also be cultivated, and will become productive in twenty or thirty years."

The following table sets forth the production of maple sugar in the State of Maine.

"At the Forks of the Kennebec, 12 persons made	lbs. 3,650
On No. 1, 2d Range, one man and a boy made	1,000
In Farmington, Mr. Titcomb "	1,500
— Moscow, 30 families "	10,500
— Bingham, 20 " "	9,000
— Concord, 30 " "	11,000
	lbs. 36,650
This, at 12½ cents a pound, is worth	$4,581"

Dr. J. states, furthermore, that this can be or is done at a season of the year when little else is to be done, and urges the propriety of procuring suitable apparatus, and thinks they could easily make themselves "independent of the *West Indies*," and could very consistently, no doubt, have added, *and the South*.

When we reflect upon this, it does seem singular that there is not more attention, labor and capital bestowed on the making of maple sugar. One man and a boy made 1,000 pounds, and probably were not engaged very long at it, say one month; and here, with their rude and ill-adapted vessels, without the outlay of anything for machinery, they have made by simple labor, $125, when "they could do little else," and then could turn about and make their grain crop besides. This is far better than making sugar in Louisiana; let those who are interested figure it up.

We next come to the noble PINE, for which our author expresses great admiration, and indulges in some poetical enthusiasm and well turned praise, because "he was reared among the noble pines of Maine, nestled in my cradle beneath their giant forms; and often has the sighing wind made music that has calmed me to repose, as it gently played through their tasseled boughs. Often have I been filled with awe as I gazed upon their massive trunks, and raised my eyes to their cloud-swept tops."

He makes three species of pine: "1st, the white; 2d, pitch pine; 3d, red, or Norway pine. The latter is remarkable for its tall trunk, which sometimes rises eighty feet before it puts out a limb; some-

times found one hundred feet in height, and four feet in diameter. The pitch pine is inferior to the red in size. The largest measurements give a diameter of 2½ feet, and 90 feet in height. This pine is chiefly valued for the excellence of its fuel; and for generating steam is preferable to any other wood. There are $200,000 worth of this wood consumed annually on the rail-roads of Massachusetts. Men are living in Maine and Massachusetts who remember to have seen some of these trees which measured more than a hundred feet in height, and four or five feet in diameter."

The common pine with us is frequently found one hundred and twenty-five feet high, and four and five feet diameter near the ground. Many solid pieces of square timber have been obtained one hundred feet long clear of limbs. But the following account of some trees is certainly almost incredible.

"At present, the white pine is altogether the most important of the species. In New-England, particularly the northern part, it is often found to measure one hundred and fifty feet in height.

"It is said, that not many years since pines were found in the eastern part of New-York, which measured two hundred and forty feet in height. Lambert's pine, on the northwest coast, is found growing to the height of two hundred and thirty feet, and Douglas's pine in the same region, the loftiest tree known, has been said to exceed three hundred feet. A tree near this, which had been blown down by the wind, and certainly not the largest there, was two hundred and fifteen feet long; its circumference, three feet from the ground, was fifty-seven feet nine inches, (nineteen feet three inches in diameter;) and at one hundred and thirty-four feet from the ground, it was seventeen feet five inches in circumference, or about six feet in diameter. In Dr. Dwight's travels we have an account of a tree in Lancaster, New-Hampshire, which measured two hundred and sixty-four feet in length."

In a note, the following extract is given, showing the size of some swamp gums near Mount Wellington, in Tasmania:

"One of them (the gums) had fallen; we, therefore, easily obtained its dimensions. The body was *two hundred and twenty feet from the ground to the first branch*, and the entire length of the tree was three hundred feet. The diameter of the base was *thirty feet*, and at the first branch, twelve feet. Its weight we estimated to be four hundred and forty tons. A gum tree standing near this, measured one hundred and two feet in circumference three feet above the ground. In the space of a square mile, I think there were not less than one hundred of these trees, none less than forty feet in circumference. It must require several thousand years to produce the largest one!" This must be the veritable Brobdingnag country of old Gulliver! If this be true, it certainly will be a very strong argument in the hands of modern philosophers, who so strenuously contend for the *different epochs* of the world, and the gradual and timely razeeing of things generally down to their present Lilliputian dimensions, preparatory to the advent of father Adam. But just to think of a log being *thirty feet through*, or thirty feet high! What use can you put it to?

No axeman could cut off a log of it, no cross-saw could do it a dodge, no saw-mill could give it "*lumber room.*" While on the subject of large trees, it may be well to mention what is called the *red wood* of California, which generally are three hundred feet high, with a clean, column-like body, clear of limbs nearly to the top, and which measure forty and fifty feet in circumference, and work well any and every way into boards or rails, square timber or saw logs. There is also a species of pine there, called sugar pine, of immense height and size. They attain, generally, to a height of three hundred feet, and have been measured sixty-five feet in circumference. The burr or fruit is from twelve to fifteen inches in length.

In the Second Part, the author gives many thrilling narratives of strange adventures—"of hair-breadth 'scapes by flood and field"—of wolves and bears, &c., &c.

In this, mention is also made of the *camp*, and *camp life*, and the various works and duties performed by each one. "Every hand is hired with the distinct understanding that he is to perform a particular part of the labor; and the wages differ accordingly, being regulated, also, by the ability with which they can fill those stations.

"First, then, comes the 'boss,' or the principal in charge; then the choppers, meaning those who select, fell, and cut the logs, one of whom is master chopper; next, the swampers, who cut and clear the roads through the forest to the fallen trees, one of whom is master swamper; then comes the *barker* and *loader*, the man who hews off the bark from that part of the log which is to drag on the snow, and assists the teamster in loading; then the teamster and the cook.

"No little pains are bestowed upon the conveniences designed for the team. With the exception of sporting-horses, I have never witnessed more untiring devotion to any creature than is bestowed upon the ox when under the care of a good teamster. A competent teamster generally calculates to do a good winter's hauling, and bring his team home in the spring in quite as good flesh as when they commenced. The last thing before 'turning in,' he lights his lantern, and repairs to the ox-hovel. In the morning, at the peep of day, or before, his faithful visits are repeated to hay and provender, and card and yoke up. No man's berth is so hard, among all the hands, as the teamster's. Every shoe and nail, every hoof, and claw, and neck, yokes, chains, and sled, claim constant attention. He is out amid the early frost, with (I had almost said) the care of a mother, to see if 'Old Turk' isn't loose—whether 'Bright' favors the near foot—(which felt a little hot yesterday)—then to inspect 'Swan's' provender-trough, to see if he has eaten his meal; for it was carefully noted, that at the 'watering-place,' last night, he drank but little; while at the further end of the 'tie-up,' he thinks he hears a little clattering noise, and presently, 'Little Star' is having his shins gently rapped, as a token of his master's wish to raise his foot, to see if some nail has not given way in the loosened shoe; and this not for once, but every day, with numberless other cares connected with his charge."

In connection with the team, he speaks of there being vast meadows with the most beautiful and nutritious grass, which is fed upon,

with avidity, in the summer and fall, and of which most excellent hay is made in the proper season, and preserved for use in the hauling season. There are similar meadows in Louisiana, near immense pine forests, where millions of tons of hay can be made every year, and millions of feet of prime lumber procured, adjacent to fine navigable water, for four, five, and six months of the year. Allusion is here made to Catahoula Lake, in Catahoula Parish.

Part Third is devoted to "River Life"—to floating the rafts of timber to mills and other market-places. This part of the volume is replete with interest, and shows with what labor, and steady, determined perseverance, those hardy men encounter and surmount all difficulties and obstacles through snow, freezing water, ice and "ice-jambs," getting their lumber down in good time to sell at advantageous prices.

The following table, showing the condition of the lumber manufacture and trade on the Penobscot River, has been obtained from the most reliable sources of information, and is presented for the inspection of those interested in such matters:

"Number of saw-mills on the Penobscot and tributaries	240
Number of clap-board machines	20
Number of lath machines	200
Number of feet of long-sawed lumber, annually	200,000,000
Price for the same, $10 per M.	
Amount of laths sawed annually (pieces)	400,000,000
at $1 per M.	
Amount of clap-boards sawed annually (pieces)	5,500,000
at $18 per M.	
Amount of shingles sawed and split annually (pieces)	110,000,000
at $2 50 per M.	
Amount of pickets sawed annually (pieces)	10,000,000
at $6 50 per M.	

"There are various other kinds of short lumber—such as staves, sash and window-blind stuff, not enumerated.

"The number of men, oxen and horses employed directly and indirectly on this river alone, would not vary, probably, much from twenty thousand. The reader may inquire, with some curiosity, 'Where does all this lumber find a market?' We may remind such, that Maine has furnished, in times past, the principal part of the lumber consumed in the United States and the *West India Islands*, though other states in the Union possess immense tracts of fine timber land, which, as the lumbering interests of Maine diminish, will be cut and brought into market. Such movements have already become quite common in Western New-York, Pennsylvania and Georgia, as well as in other portions of the country where there are large tracts of timber land, much of which has already *been bought up by Eastern lumbermen*."

Yes, the southerners will stand by with folded hands, or strut about with the vain pomposity of Mr. Wilkins Micawber, and wait for "something to turn up," while others, possessed of more energy, lay hold of the prize, and appropriate the treasure to their own advantage. Here, within the limits of this state, are vast tracts of pine timber land, inviting capital and industry to improve the golden op-

portunity, and gather fortunes with very little outlay; but no, they defer, procrastinate and put off, till the "*Eastern lumbermen*" will soon come on and "*buy up,*" and pocket it all.

"The island of Cuba alone consumes *forty millions* of feet per annum for the *one article of sugar-boxes.*"

Here, then, at our very doors, almost in our very yards, the "*Eastern lumbermen*" bring their lumber a distance of nearly two thousand miles, and sell it at a remunerative price, while we lounge in listless indolence, without the semblance of an effort at competition.

STATISTICS OF LUMBER ON THE KENNEBEC.

		Average Price.	Total.
No. of Saw-mills	150		
Amount of Long Lumber	66,000,900	$12,00	$802,000
" " Laths	17,000,000	1,00	17,000
" " Clap-boards	4,000,000	15,00	60,000
" " Shingles	26,000,500	2,50	66,250
			$945,250

Probable No. of men employed, 1,200 to 1,500.
" " oxen and horses, 1,000.

STATISTICS OF THE ANDROSCOGGIN.

No. of Saw-mills	60		
" " Shingle machines	10		
" " Clap-board "	9		
" " Lath "	9		
Amount of Long Lumber per anuum	5,000,000	$14,30	$71,500
" " Shingles " "	3,000,000	2,75	8,250
" " Clap-boards " "	450,000	22,50	12,375
" " Lath " "	2,250,000	1,18	2,773
			$94,898

Besides these, there are others on smaller streams whose annual profits amount to more than $50,000.

Our author steps over into the province of New-Brunswick, and gives the following table:

Counties.	Establishments for sawing.	Value of all mills, improvements, &c.	Quantity sawed during year.	Value of lumber.	Number of men.
St. John's	29	£31,700	11,305,000 ft	£28,262	320
King's	30	14,800	3,905,000	9,785	287
Gloucester	7	15,500	2,920,000	6,050	105
Westmoreland	53	18,530	8,805,000	22,012	324
Kent	10	6,950	2,650,000	6,575	84
Northumberland	15	44,350	15,600,000	39,800	800
Sudbury	7	8,500	4,500,000	11,250	103
Queen's	6	9,200	6,200,000	15,500	118
Charlotte	42	64,500	38,955,000	99,475	1,357
York	29	18,000	9,000,000	22,500	300
Grand Total	228	232,030	103,840,000	261,210	3,792

"To this amount of *manufactured* lumber may be added about two hundred and fifty thousand tons of square timber; this is not far from the annual amount manufactured in this province. Four dol-

lars per ton is about a medium price; this gives a product of $1,000,000. To this we may add, as the product of masts, staves and shingles, per annum, $20,000.

"Grand total of the lumbering produce in dollars, reckoning four dollars to the pound:

Long Lumber	$1,041,840
Square Timber	1,000,000
Other lumber as above	20,000
	$2,061,840"

There is a deficiency in the work in not giving the average prices of oxen, horses, &c. and the wages paid to the workmen in the different departments of labor. A very interesting table might have been formed, showing the prices of these things as far back as could be obtained, and what is customary *now*. This would not only have been interesting to the present readers, but would also be a storehouse for the future writer in years to come.

In this state a good strong yoke of well-broken oxen is worth $60, and four yokes of such will haul a log forty feet long or longer on the ground without any wheels or sled. If the road is wet, or if the weather is cool and a little showery, so as to allow the log to slide with ease, four oxen can haul a forty foot log four feet at the butt with ease. Nearly all the logs are hauled without sleds or wheels, and this is not inaptly called "snaking." Our lumbermen never "*bark*" their logs.

One man can easily cut down, butt off, and log off, ten logs a day, the trees ranging from twenty to thirty inches diameter at the top cut.

Two men working together, one cutting while the other hauled, have cut in one day five trees forty feet long, and hauled them two miles, and were paid one dollar a piece for each log.

The pine and cypress timber is mostly cut into logs of ten feet, and then ten logs are placed side by side and held together by poles and strong pins; this is called "*splicing*;" and each lot of logs thus "*spliced*," is called "*a crib*." A log is also technically called "*a tier*."

"*A raft*" varies in size from 300 to 500 logs, and is made by uniting several "cribs" together. A raft of ash can be made of logs thirty feet long, having from three hundred to five hundred logs. Sometimes our raftsmen carry down on their ash and cypress rafts parcels of oak timber and black locust, or common acacia. These timbers are so very heavy that they will not float; although dry, seasoned oak has been known to float a few days till it became saturated with water, when it will sink unless rescued.

In getting out *square timber* for rafting, the usual day's work for a man is to cut down, score-hack and hew one hundred feet, a foot square at the butt and ten inches square at the top. The customary price for this work is from one and a half to two dollars per hundred feet, and the workman to find himself. Plenty of men can be hired to work at this for $18 per month and board.

Square timber in New-Orleans is worth from four to ten dollars a

hundred feet. Timber suitable for ship-building, spars, masts, &c., commands better prices than any other.

In "*cord wood*" one man can cut and pile two cords of wood a day; and there are many who can do more than this either in green or dry wood.

In conclusion, we can commend the volume under consideration to every person, as it is really full of material for every variety of taste; full of fact and fancy, romance and reality.

ART. III.—MAINE.

ITS EARLY HISTORY—PHYSICAL ASPECT—AGRICULTURAL AND MINERAL RESOURCES — COMMERCE—MANUFACTURES—GOVERNMENT—FINANCES —POPULATION—SCHOOLS, COLLEGES, &c., &c.

[This paper constitutes another of the series of American states which we have been publishing at intervals for the last two or three years.]

In the year 1603, a company of Bristol merchants fitted out an expedition of two small vessels, under the command of Martin Pring, for the purpose of exploring the shores of America north of Martha's Vineyard and Massachusetts Bay, and of opening a trade with the natives—some very flattering notices having been received of that portion of the New World from Bartholomew Gosnold, who had visited it the year before. Pring landed on the coast of Maine, in June, 1603, discovered some of its principal rivers, and returned to England. In 1606 he repeated the voyage, and made a more accurate survey of Maine than before. The whole country, from the mouth of the Hudson to New-Brunswick, was in the same year granted by James I., of England, to a body of "knights, gentlemen, and merchants," in England, called the Plymouth Company. This company sent out a colony of planters, under George Popham, who landed at the mouth of the Kennebec River on the 21st of August, 1607, and erected a few rude cabins, a store-house, and some slight fortifications. Forty-five only of the emigrants remained at the place, which they called St. George; the rest returned to England in the following December. The place where this colony, usually called the Sagadahoc colony, passed the winter, is now the town of Phippsburgh. The winter was extremely severe, and the poor emigrants suffered from famine and hardships of every description. Their store-house was destroyed by fire, their commander died, and in the following year they abandoned the settlement, and returned to England.

The principal object of trading vessels to the American coasts, at that early period, was the collection of furs and skins, and of sassafras, then becoming fashionable in England, as a medicinal drug. Pring took home with him one of his vessels entirely freighted with sassafras, and the other with furs and skins.

The next settlers on the New-England coast were the Pilgrims, at Plymouth, in 1620, from whom settlers gradually extended to the coasts of Maine. Gorges and Mason, two Englishmen, had long been engaged in trafficking on these coasts. In 1621 Mason obtained

the grant of a tract of country, extending from Salem to the mouth of the Merrimac; and in 1622 Mason and Gorges, together, obtained a grant of the whole tract from the Merrimac to the Kennebec, which they called *Laconia*. They sent out a colony of fishermen, who settled at the mouth of the Piscataqua, where Portsmouth now stands. Others, fishmongers from London, settled at Dover, eight miles up the river. These settlements, in what is now New-Hampshire, are among the oldest in the United States; but they did not prosper, and were only fishing stations. Settlements of stragglers continued to be made eastward along the coast. In 1625 there was a settlement at what is now York, and another at the mouth of the Saco. In 1632 the people of Plymouth established a trading-house on the Penobscot, and one at Machias, at the entrance of the Bay of Fundy, both of which places were plundered by the French in 1633, who claimed the whole country east of Pemaquid Point. In 1635 the French sent an armed vessel to the trading house at Penobscot, and took possession of it, paying the traders for their goods in bills on France. The traders were sent home to Plymouth. An attempt was made to regain the place, but without success; and the French held it many years.

In 1635, the Council of New-England surrendered their patent, and their territories fell to eight different proprietors. Gorges was one of them; and to his territories, lying between the Kennebec and Piscataqua, he gave the name of *New-Somerset*. He sent out his nephew, William Gorges, as his deputy, to establish a government over the settlements. A general court was held at Saco. In 1639, Gorges, who for thirty years had been engaged in colonization projects, and who had lost by them some $98,000, obtained a royal charter for his American provinces, and changed their name to Maine, in honor, it is conjectured, of the Queen of England, who had some feudal relation with the French province of that name. It had, however, been long the custom of the planters and fishermen of the whole New-England coast, to designate it as "the Maine," to distinguish the main land from the islands.

Gorges, who appears to have had somewhat pompous and inflated notions of things, attempted to erect over his fishmonger subjects a stately government, consisting of a lieutenant, chancellor, marshal, admiral, (though he had no navy,) and other high officers, who, together with eight deputies chosen by the people, were to constitute the general court, or legislative council. The little hamlet of Agamenticus he chartered as a city, and changed its name to *Georgiana*, in honor of himself.

When the civil war commenced in England Sir Fernando Gorges adhered to the king, and his enemies succeeded in getting wrested from him all his territory north and east of the Saco. Gorges died in 1647, and in 1652 his little province was annexed to Massachusetts, and Georgiana changed to York.

The heirs of Gorges contended with Massachusetts for Maine until the year 1677, when they sold all their right and title to it for the sum of £1,200. The province, as claimed by Massachusetts, under this

purchase, did not extend east of the Kennebec. The French claimed all east of that as part of Acadie; and New-York, then governed by Andros, claimed all between the Kennebec and Penobscot. Andros built a fort at Pemaquid, and purchased peace of the Indians, who had nearly depopulated the white settlements, by agreeing to pay them an annual tribute of corn—a peck for each English family.

From 1670 to 1712, the English settlements in Maine suffered much from the incursions of the Indians and French. Some of the towns were completely destroyed, and large numbers of people massacred. The government of Massachusetts offered a reward of $132 for every grown Indian taken prisoner. By the treaty of Utrecht, in 1712, France yielded to England all her claims to Acadie, and thus the Indian massacres in New-England ceased. Of all the flourishing settlements on the coast of Maine, however, only three were left, the others having been destroyed.

Maine being incorporated with Massachusetts, its history is merged in that of the latter, and we hear nothing more of it until after the Revolutionary War. In 1785 its population was so increased that a convention of the people was held at Portland, to consider the expediency of erecting themselves into an independent state.

Portland was first settled in 1632, and purchased by Gorges in 1637. In 1675 it was destroyed in the Indian war, and again in 1690 by the same enemy. It was rebuilt in 1715, and in twenty years afterwards its trade in lumber was extensive, so that it supplied the British navy with masts and spars, which were chiefly exported in foreign vessels. At the commencement of the Revolution, Portland had a population of 1,900, and a port tonnage of 2,555. It had 230 houses, and a Congregational and Episcopal church. In 1775 it was bombarded by the British, and 136 houses, including the principal public buildings, were destroyed. The place was at that time called Falmouth, which was changed to Portland in 1786. It is now the largest town in Maine.

It was not until 1802 that another effort was made by the people of Maine to become a separate state. In 1788 the people opposed the ratification of the federal constitution, chiefly on the ground that it might prove an obstacle to their favorite project of becoming an independent state, which was not effected until 1820.

The boundaries of Maine, as fixed by the late treaty, are the result of a controversy with Great Britain of a quarter of a century's standing, and one which came near involving the two countries in a war. By the treaty, the St. Croix, and a line running due north from the monument at its source to the St. John's River form the boundary on the east. On the north, the line follows the St. John's and St. Francis rivers to lake Pohenagamook. On the west, the line follows the high lands from that lake in a southwest direction to the northeast corner of New-Hampshire, which state forms part of the western boundary. The Atlantic is on the south.

Maine is the largest of the New-England states, having an area of 30,000 square miles, or more than four times the area of Massachusetts. Maine is diversified, of an uneven surface, but not generally

mountainous. Near the sea the land is mostly level. Farther inland, it becomes hilly, and finally mountainous. Mount Kotahdin, the highest elevation, is 5,300 feet high. In the interior there are a number of small lakes, noted for their scenery. Maine has a sea-coast of over 230 miles, indented by numerous bays, and protected by numerous islands. It has more good harbors than any other state in the Union. The land on the sea-coast, for from ten to twenty miles inland, is not very fertile, but improves in quality as one leaves the coast. In the northwest and southeast parts, the soil is light and indifferent. Between the Penobscot and Kennebec there are lands equal in fertility to any in the Union.

The climate of Maine is subject to great extremes of heat and cold, ranging from 100° of Fahrenheit's thermometer, in summer, down to 27° below zero in winter. It is, however, generally healthy. The season of vegetation does not continue in vigor more than three and a half months in the year, its greatest length being from the 21st of April to the 16th of October.

Maine has a number of fine rivers. The Penobscot, 250 miles long, is navigable for large ships to Bangor, 52 miles from the ocean. The Kennebec, 250 miles long, is navigable for large ships 12 miles, to Bath, and for vessels of 100 tons, 42 miles, to Augusta. The Saco is navigable only six miles. The entrance and exit from the rivers of Maine are very much facilitated by the high tides which prevail there. At Bangor, 52 miles from the sea, the tide rises seventeen or eighteen feet.

It is computed, that at least one tenth of the surface of Maine is covered with water, so numerous are the lakes and ponds in the interior. Lake Moosehead, the largest, is 50 miles long, and 10 or 12 broad. Penobscot Bay is 30 miles long and 18 wide. Casco is 20 miles long.

Maine is noted for its fisheries, lumber, and ship-building. Its other products are grass, flax, and all the different kinds of grain; but the season is often too short for Indian corn. The wild lands produce vast quantities of timber and lumber, which may be regarded as the staple production, the annual amount exported being from 10 to $15,000,000.* The state is well adapted to grazing and wool-growing, the amount of wool being several millions of dollars annually. Lime, marble and ice are exported in vast quantities. Ships are manufactured for a foreign market, and the fisheries furnish employment for thousands of the citizens.

The most commercial places in the state are Portland, Bangor, Bath, Hallowell, Augusta, Thomaston, famous for its lime, Belfast, Wiscasset, Wells, Gardiner, Brunswick, Camden, Castine, Eastport, and Topsham, noted for its ship-building.

Government.—The government of Maine consists of a Governor, Senate, and House of Representatives. The governor is elected annually by the people, and has a salary of $1,500. A council of seven

* For an account of the lumber trade of Maine, see "Forest Life and Forest Trees," an article in the present number of the Review.

persons to advise the governor, is elected annually by the joint ballot of the legislature. The members of the Senate and House of Representatives—the former consisting of thirty-one, and the latter of one hundred and fifty-one members, are elected by the people, annually. All male citizens of the United States, 21 years of age, (except paupers,) who have been in the state three months previous to an election, are voters, by written ballot.

Judiciary.—This is vested in a supreme judicial court, and such other courts as the legislature may, from time to time, establish. The Supreme Court has four judges, with a salary of $1,800. The state is divided into three districts, with a judge over each—salary, $1,200. In each of the 13 counties there is a Probate Court, with salaries varying from $150 to $620.

Finances.—Maine has a total debt of $600,500, paying an interest of $36,000. From the last report of the state treasurer, we have the following:

Amount of receipts from May 1, 1850, to April 30, 1851		$426,196 30
Balance of cash in treasury May 1, 1850		125,924 07
		$552,120 37
Amount of expenditures from May 1, 1850, to April 30, 1851, inclusive		$507,450 30
Leaving a balance in treasury May 1, 1851, of		$44,670 07

Some of the heaviest items of expenditure in 1850–'51, were as follows: Pay of the legislature, $47,976; salaries, $24,557; roll of accounts, $15,238; cost of criminal prosecutions, $26,887; school fund, $31,610; state roads and bridges, $6,750; deaf, dumb, and blind, $5,126; state reform school, $3,000; insane hospital, $602; teachers' institutes, $2,600.

The resources of the state, consisting principally of direct taxes and income from the land-office, are estimated at $688,692, for 1851. During the same year the chief resources of income were as follows: Direct taxes, $207,575; land-office, $137,341; permanent school fund, $2,707; school fund, No. 18, $28,440; duties on commissions, $1,850; bank dividends, $800; U. S. stock and premium, $21,850; interest on U. S. loan, $600.

Population.—The progress of the population of Maine, since 1790, has been as follows:

		Increase per cent.
1790	96.540	
1800	151.719	57.2
1810	228.705	50.7
1820	298.335	30.4
1830	399.955	34.0
1840	501.793	24.9
1850	583.088*	16.6

The present population consists of 103,787 families, containing 296,635 white males, and 285,128 white females. The free colored popu-

* This gives 1,944 inhabitants to the square mile.

lation is 1,325. The number of dwelling-houses in the state is 95,797. Its number of representatives in Congress is six, having lost one by the apportionment of the last census. As each representative must represent 93,702 persons, Maine has a residuary fraction of 21,020 perons.

The two most populous cities in Maine are Portland and Bangor, the population of the former being 26,819, and of the latter, 14,441.

Common Schools.—In 1828, the state set apart 20 townships of public land as a basis for a school fund. These lands have yielded, thus far, $104,363, which is permanent school fund. In 1850, there were set apart 24 half townships more. The banks are also required to give to the school fund, semi-annually, one-half of one per cent. on their capital stock. This tax, in 1850, amounted to $27,230; which, added to the interest arising from the school fund, amounting to $6,216, makes $33,492, the sum divided among the towns of the state, in 1850, for school purposes. The inhabitants of every town are also taxed 40 cents each for the support of schools. In 1850, this tax amounted to $264,351.

The number of common schools in the state, in 1850, was 6,627, with 230,274 pupils. The average monthly wages of male teachers is $16 66; of female, $5 92. There are school libraries in nine towns. There are 92 chartered academies in the state. Teachers' institutes also have been in successful operation for several years; 1,732 teachers attended them in 1850.

Colleges.—Bowdoin College, at Brunswick, named in honor of its principal benefactor, the Hon. James Bowdoin, was founded in 1794. Its president is Leonard Woods, jr., D. D. It has 14 professors, 1,051 alumni, and 121 students, at the present time. Its library contains 22,900 volumes. Waterville College was founded in 1820, by the Baptists, at Waterville. David N. Sheldon, D. D., is its president. It has five professors and 76 students. There is also the Bangor Theological Seminary, at Bangor, founded in 1816; the Wesleyan Seminary, at Readfield, founded in 1822. Maine has also the Maine Medical School, at Brunswick, founded in 1820; it has five professors and 51 students.

There were in Maine, in 1840, 3,241 persons, over 20 years of age, who could neither read nor write.

Internal Improvements.—The Cumberland and Oxford Canal, connecting Portland with Sabago pond, and by locks in the Songo River, with Brandy and Long ponds, forms a navigation of 50½ miles. It is 34 feet wide, contains 26 locks, and cost $250,000.

Rail-roads.—The Androscoggin and Kennebec Rail-road is 55 miles long, and cost $1,621,878. The Bangor and Piscataquis is 11¾ miles long. The Calais and Baring, 6 miles long. The Portland, Saco and Portsmouth is 52 miles long. The great Atlantic and St. Lawrence Rail-road, extending from Portland to the Canada line, which it strikes at the town of Canada, in Vermont, where it connects with the St. Lawrence and Atlantic Rail-road, extending from Montreal eastward, is 156 miles long. Rail-road cars now run through from Montreal to Portland. It has a branch 13 miles long.

The Kennebec, Bath and Portland Rail-road connects Portland with Augusta, the capital of the state. It is 60 miles long. There is also the York and Cumberland from Portland to Great Falls, New-Hampshire, which is about 50 miles long.

On the 1st of January, 1852, Maine had 315 miles of rail-road complete and in use, and 127 miles in progress of completion; making in all, 442 miles.

Manufactures.—From the returns of the last census, we have the following statistics on the manufacture of cotton, woolen, and iron, in the state of Maine, up to 1850:

	Capital invested.	Hands employed.	Value of Products.
Cotton goods,	$3,329,700	3,739	$2,596,356
Woolen goods,	467,600	624	753,300
Pig Iron,	214,000	71	36,616
Iron Castings,	150,100	244	265,000

The number of spindles employed in the manufacture of cotton, in 1850, was 142,700; but during that year 112,500 were stopped.

The quantity of lumber of all kinds manufactured in Maine, in 1850, was 203,754,201 feet; in 1851 it was 202,005,830 feet, which, at the average price of $10 per thousand feet, would amount to $2,020,058.

Maine is noted for its ship-building. In 1850 it built 127 ships, 75 brigs, 115 schooners, 3 sloops, and 6 steamers;—in all, 326 vessels, having a tonnage of 91,211. No other state in the Union built half as many, except New-York, which built 224 vessels, of a tonnage of 58,342.

Salt is manufactured in large quantities in Maine; also, paper, leather, hats, caps, bonnets, articles of saddlery, pottery ware, bricks, lime, machinery, hardware, cutlery, cordage, carriages and wagons, furniture, &c. The amount of capital employed in manufactures is not probably less than $10,500,000.

COMMERCE.

Maine exported, in the year ending July 1, 1850, domestic products to the amount of $1,536,818, and foreign to the amount of $29,094. Her total imports, for the same year, amounted to $856,411.

BANKS.

Maine has thirty-seven banks, with a capital of $3,586,100 for all of them. Their entire circulation is $2,994,905. Their total liabilities amount to $8,251,260. These are met by the following resources:

Loans	$6,450,460
Bank balances	813,232
Specie on hand	630,296
Real estate	102,570
Bills of Maine banks	150,016
Bills of other banks	104,686
Total resources	$8,251,260

Such is the condition of banking in Maine, as furnished by the last

annual abstract, published by the Secretary of State in May, 1851. The average dividends of these banks is about four per cent.

More complete statistics of Maine cannot be given, until the returns of the last United States census are known.

ART. IV.—FREE BANKING.

It is our purpose, in this and its succeeding articles, to discuss the subject of Free Banking. Our inquiry will be directed first to banking in general, and lastly to that system which obtains in the State of New-York, and is now proposed for adoption in the State of Louisiana. Whilst we will attempt no formal defence of the banking laws of Louisiana now in operation, we will, as fairly as possible, meet all the arguments urged in favor of the New-York system, and endeavor to prove it faulty in its nature, and ill-adapted to the wants of our condition.

To facilitate our inquiry, we will examine, as briefly as possible, the system of a paper currency, and deduce therefrom such principles as may test the soundness of the schemes which are proposed for our adoption.

As words often mislead, and have been well called "the counters of wise men, but the money of fools," we will, without delay, fix the meaning of the words which head our article.

Free Banking is a taking phrase, and well adapted to the popular ear, but its meaning is entirely technical; and when the words are used, that system only is referred to which has for the basis and guarantee of its circulation, municipal, state, or national stocks. Under this classification there may be a multitude of varieties, but it is not now our business to examine their details. The existence of this system necessarily implies a national, state, or municipal debt of considerable extent. Without such debt no stock would exist; and in its proper place we will discuss the propriety of making state or municipal credits the basis of our medium of exchange. We will only add in this connection, that the extent of such debt is the measure of Free Banking, and that prosperous and debt-paying states can alone furnish a suitable basis for such currency; else the circulation and capital of the banks will be as uncertain as its basis, and will prove as unfit a medium of currency as the promissory notes of private individuals.

We will make our inquiry still easier if we go at some length into the nature of banks in general, and from the history and experience of the past, eliminate such general truths as may guide us in coming discussions.

By the general term banks, we of course allude to those institutions which receive deposits, discount notes, and issue paper money.

Important as all their functions are, the last named is far the most potent. Although banks of mere discount and deposit may wield

immense power through the agency of bills of exchange and the use of large deposits, yet their evils are few, and their abuses and benefits confined to classes purely commercial. Far more extensive are the powers of banks of issue. Their operations touch every branch of industry, and either for weal or woe, most sensibly affect the great producing and laboring classes of the community.

What is then a bank note?

For simple as the question may appear, its answer deserves to be constantly remembered by us. So much are men led away by the mere forms of life, that it is often important for us to call to mind the simple, but fundamental and primary truths which lie beneath the mere exterior of society.

Trite as the truth is, we must in this discussion unceasingly remember that paper money is nothing but a loan from the public to the bank which issues it. They are mere substitutes for money, and bear no higher relation to the public wealth than individual promissory notes.

So far and so long as the public receives them in exchange for their products, so far and so long is the loan made to the banks. We do not deny to banks invaluable service to the commercial community. But such institutions can no more create money than the mill which converts rags into paper.

Their great uses are found in affording simple and convenient modes of paying and collecting money, in aiding business-men to anticipate the maturity of their credit sales, and in furnishing a portable and convenient medium for the exchange of commodities. Their functions are no higher, and all the complicated movements attending their operations are foreign to their essential nature.

Another fruitful source of popular error here stares us in the face. It is the supposed influence of banks on credit. The earnest advocates of these institutions generally commence by an exaggerated statement of the benefits resulting to individuals and nations from the greatest possible extension of credit. Assuming that the banking system is the one most likely to effect this object, they forthwith declare it the *credit system*, and denounce any attempt to reform its abuses as a war upon credit itself. It is hardly necessary to disprove such statements. For it is not true that individuals or nations are benefited by the greatest possible extension of credit.

Credit may be pushed to an excess which generates extravagance and wild speculation, results that bear with them, as we of the South know too well, a train of the most disastrous consequences.

It is not true, as is often urged by the friends of this system, that the great prosperity of the United States has been owing to the principle of credit.

Labor is the only ultimate source of the wealth, and, we may add, the welfare of nations. It has been well called "The massy Doric" which sustains the fabric of society.* The secret of our national success is the steady, resolute, persevering, indefatigable, self-denying

* Mackintosh.

labor, performed for the first time in the history of the world, for their own account, by the whole population of a great country.

The favorite topics of our fathers were not the advantages of getting credit, but of industry, economy, temperance and freedom from debt.

Credit, absolutely viewed, is a good thing; but every transaction that brings it into operation, generates an element of directly opposite character.

There are two parties to all transactions of credit. If one gives credit, the other gets into debt. Now debt, absolutely viewed, is a bad thing, and it is only by comparing the results of the operation as viewed under both of these aspects, that we can decide whether it will prove beneficial or otherwise. Credit is, therefore, far from being an unmixed good. We may have too much of it; and the only way of assuring ourselves that we are within the proper limits, is to follow the dictates and laws of nature.

If a man have sufficient confidence in his neighbor to trust him with *real* capital, the credit will no doubt be beneficial to both parties. But where credit is artificially stimulated by law—where companies are incorporated for the express purpose of making loans, and virtually supplied by the state with unlimited amounts of fictitious capital, to be employed in this way, it is apparent that the principle will and must be pushed to ruinous excess.

Having thus attempted to divest banking of some of those errors which cluster around it, and well nigh conceal the true character of the fabric, let us now ascertain what are the requisites to a sound paper currency.

The first essential of sound banking is, that its paper shall be instantly, and on demand, convertible into the money it professes to represent. We had almost pronounced this an axiom in banking. But unfortunately the disasters of 1836 and 1840, recent as they are, have failed to impress this truth deeply on our minds. Already we hear of schemes advocating inconvertible and irredeemable paper money, based on the landed property of the state. It is true that they are mere theories, and ever may they remain such.

All men are forced to acknowledge the salutary check which specie-payment imposes on a system whose worst feature is its constant tendency to excess.

Legislatures have in vain enacted penal clauses to prevent mismanagement of banks.

In vain have they attempted a supervisory control over them, through boards of currency and examining committees.

All such expedients, good enough as far as they go, utterly fail to guarantee to us a sound paper currency.

The ingenuity of man is superior to the restraints of law; and where interest impels, legal hindrances are mere cob-webs in the path of the adroit. "To drive a coach and four through a bill in chancery" is not easier than to drive one through a banking law.

Instant convertibility to specie is therefore vitally important in securing a sound paper currency. Gold and silver are mighty conservators in our world of commerce, acting as comptrollers over the

evil and radical tendencies which always attend banking in this country. No wonder, then, that their importance is greatly exaggerated, and their exportation viewed as a national calamity.

Lest we may be thought to have the taint of such exaggeration, we will close this article with some inquiry into the relation borne by the precious metals to other articles of value, and in what consists their superiority as a medium of exchange.

It is clear that gold and silver, whilst they have in themselves an inherent value, are not desired by the tradesman, the laborer, and the merchant, for such innate worth. Their value is two-fold. First, like corn, tobacco, and cotton, they are worth precisely the cost and trouble of their production. If the miner and capitalist did not get a just return for their labor and capital in the price of the ore, they would at once abandon its production, until a decrease of supply enabled them to obtain a fair remuneration for their toil and outlay. Thus far the precious metals differ in no wise from corn or tobacco; and either of these two commodities might, and, in fact, have been, employed in the same functions as gold and silver. But custom and convenience have found the precious metals the best instrument of exchange. In illustration and support of this view, we quote at length from one of the ablest politico-economical writers of the day.

"On the whole, no commodities are so little exposed to causes of variation. They are more constant than almost any other things in their cost of production; and from their durability, the total quantity in existence is at all times so great in proportion to the annual supply, that the effect on value, even of a change in the cost of production, is not sudden. Gold and silver are more fit than any other commodities to be the subject of engagements for receiving or paying a given quantity at some distant period. If the engagement were made in corn, a failure of crops might increase the burden of payment in one year to four-fold what was intended; or an exuberant harvest might sink it in another to one-fourth. If stipulated in cloth, some manufacturing invention might permanently reduce the payment to a tenth of its original value.

"The thing which people would select to keep by them for making purchases must be one which, besides being divisible and generally desired, does not deteriorate by keeping. This reduces the choice to a small number of articles.

"In order that the value of the currency may be secured from being altered by design, and may be as little as possible liable to fluctuation from accident, the articles least liable of all known commodities to vary in their value, the precious metals, have been made in all civilized countries the standard of value for the circulating medium; and no paper currency ought to exist, of which the value cannot be made to conform to theirs."*

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* Mills' Political Economy, vol. i.

ART. V.—THE UNITED STATES—HER PAST AND HER FUTURE.

The unexampled progress of the United States is the wonder of the world. A simple glance at her condition at present in comparison with it when she began, fills the mind with the greatest astonishment. Beginning with a population of three millions, she now embraces upwards of twenty-three millions. Covering, in the outset, a territory reaching from the Atlantic to the Mississippi, she has gradually extended her western borders, until stretching across the vast continent, she has established her western boundary on the shores of the Pacific. With but ten or twelve colleges and a few more high schools, and a corresponding deficiency in all the facilities for general elementary education, she now has several hundred colleges, with the means everywhere afforded for the diffusion of the highest order of literary instruction. With but a few, and those imperfect, manufacturing establishments, and the absence of well nigh all the artificial elements of public wealth, she now has establishments for the manufacture of every kind of her raw material, internal improvements for the development of her industry, enterprise and natural resources, and everywhere indications of the highest national and individual prosperity.

The inquiring mind is naturally incited to investigate the causes of these wonderful results. These are doubtless many; some of them being rather the conditions or occasions of progress, without which it would not have occurred, rather than the efficient agents of it.

The particular era in the world's history in which our country has existed has been highly favorable to this progress. Other nations have begun their career in periods of comparative darkness, and have been compelled to struggle during all their history with elements of weakness, which in these periods were imbibed. But ours began with the benefit of all their experience, and in the midst of the light they had stricken out. Not merely the light upon the great problems of government and of national policy which the experience of other nations had elicited, but all the treasures of literature, science and art, which the wise of other ages and countries had accumulated, were all ours from the first moment of our national existence. It was in that period of the history of nations when they had come to a juster appreciation of the true elements of national glory,—when, as the result of former preparatory experience, they had begun fully to avail themselves of the advantages of science in its application to industrial pursuits, of commerce in its most extensive range, and of those elements of activity and energy which have so much contributed to the prosperity of the world, that the United States began her existence; and it has been under all these favorable influences, and surrounded by these propitious circumstances, that her course thus far has been run: so that, like no other nation, she never had a childhood of probation and weakness, but sprung fully grown into existence, with all the elements of maturity, and with all the benefits of culture and experience.

The sturdy, self-denying qualities, the lofty, independent spirit which the colonial condition of the people and the peculiar character of the then wilderness country tended to develop and foster, gave to the American population, in the outset, a physical, moral and intellectual character peculiarly favorable to national progress, while the protracted and doubtful character of the struggle for independence and the teachings of a bitter experience, all conspired to produce a love of liberty, a heartfelt patriotism, and a capacity for self-government, the very qualities essential to a successful republic.

The rich, abundant and varied character of the natural resources of our country have furnished many facilities for extraordinary prosperity. No nation perhaps in this respect has enjoyed equal advantages. These have opened up to our people well nigh every advantage afforded by the material world, and obviating the necessity of those artificial helps to which most countries are compelled to resort, make the means of abundant living everywhere easily attainable. Their promising, inviting character, is a perpetual incentive to industry and enterprise, and call into constant activity the elements of social well-being.

But though these have been the occasions, without which probably American progress would not have been such as it has been, yet there are other facts to which it is to be referred as its immediate and efficient cause.

The studied abstinence from all international difficulties, which has been a fixed principle in our national policy, has been among the prominent of these causes. While most other governments, either from a desire of power, or from weakness or bad management, have been, during much of their history, engaged in actual wars, or under that constraint which results from a constant apprehension of such catastrophes, our government, acting upon the noble policy of non-intervention in foreign broils, has sought in a high and honorable way only to pursue its own interests in its own legitimate sphere. Though ever sympathizing with the oppressed of all countries, and deeply interested in the prevalence of free institutions, of civil and religious liberty everywhere, yet it has ever felt that these ends could be best subserved by the force of moral suasion and the light of its own brilliant example, rather than by the stern edict of the sword.

Those drains of population and treasure,—those immense national debts, the interest on which have made necessary such oppressive and ruinous taxes,—those inroads upon social economy and happiness,—those blights upon public morals and individual character, which a contrary policy has brought upon other countries, and which has contributed so much to cripple their energies and resources, ours has, for the most part, escaped. But not merely in this negative sense has our country gained, in comparison with others, by this policy, but positively in that these advantages thus retained have themselves constituted most efficient elements of individual and social progress.

In the absence of these interfering warlike entanglements, our peo-

ple have not been under the distracting influences of a military spirit, or squandered their time and diverted their energies in constant and extensive warlike preparations, but have been in the condition all the while to devote themselves exclusively to the arts of peace, to the ordinary pursuits of life, to those interests which are the proper foundation of individual happiness and national greatness.

This peaceful policy, securing to us relations of amity, and even of confidence, with all nations, has opened up to us, uninterruptedly, the most extensive range of commerce and all the benefits of the widest international intercourse; advantages which, while they are inferior to none in their influence upon the prosperity of a nation, have been enjoyed in like degree, and with like constancy, by no other nation.

That principle, so distinctly guarantied by our free institutions, of throwing every man upon his own resources, and allowing him the largest liberty compatible with the rights of others, to work out his own fortunes, has been among the most efficient of the causes of this astonishing national progress. It would be impossible that a people as enlightened as the Americans have ever been, and in a country enjoying so many natural advantages, should not, when thus unrestricted, rapidly improve their condition. In the enjoyment of this principle, the American people have had every opportunity for the development of the individual man. It is this, which more than all else, has fostered industry, enterprise, self-reliance, the spirit of self-culture, indeed, every quality which tends to elevate man individually, and to improve his outward circumstances. In allowing merit, in whatever ranks it exists, to seek and obtain its own reward, it has furnished the most powerful incentive to all classes of men to elevate their condition. Talent of every kind,—all the resources of the people, therefore, are being brought constantly into use, and are contributing their full benefit to the entire community. Allowing, and, indeed, encouraging all to select their vocations according to their tastes and genius, the various departments of life are supplied with the best possible qualifications, and the whole machinery of society has every possible advantage for its successful operation. Under the influence of this great principle, the various interests of society have been allowed to regulate themselves. Nothing, therefore, has been premature and partial; but the various departments of a just, social and political economy have been developed just as the country has demanded them. The growth of every interest has been healthy and sound. The resources of the country have been brought into use at the right time and in right degrees, making its prosperity symmetrical and durable.

Indeed, whatever other causes may have contributed to the prosperity and glory of our country, it has been, after all, to this all-pervading principle that they are indebted for their efficiency and success. So related is it to all the sources of progress, that it needs but to have a distinct recognition and application everywhere to secure every possible advantage to every possible interest. It is not therefore by positive, or by partial legislation, that our progress is to be

perpetuated; it is by the removal of all restrictions not necessary to civil liberty, and the dissemination of those influences of education and religion which improve the people's capabilities for this enlarged sphere of self-government, that this glorious result is to be secured.

But there is in the American race an actual superiority, and in this is found another prominent cause of the rapidity of our national progress.

All the races now existing are but the results of combinations of different races, and the superiority of a race is dependent upon two facts: the mixture of which it is composed, and the nearness of the time at which the mixture took place. Every race has some qualities in higher degree than others, which are in fact the characteristics of that race. The French, for example, are distinguished for their excitability and enthusiasm; the Germans for their plodding, philosophic cast, and the Spanish have their distinctive qualities. Now, though these qualities are all desirable in themselves, yet it is their harmonious combination that constitutes a perfect race. Such a combination, by the mixture of these races, would be approximated. For awhile in many instances the result of the mixture might not be different from one of the original elements, yet the effect of the law applicable to the case would be to secure a combination of the qualities distinctive of the original stocks, and consequently a superior race. The French race is composed originally of a small number of distinct races, being descended mainly from the Gallic. Hence the predominance in it of certain qualities, and the absence of certain others, giving rise to that evident want of balance in their constitution, and that light, vascillating temperament so characteristic of it. The German race is derived from a somewhat greater variety; but those qualities were distinguished mainly for the same attributes, the phlegmatic, the patient, the philosophic, the qualities in which the French original was deficient. Hence, though this race is distinguished in a remarkable degree by these characters, yet being denied opportunity by reason of the limited number of its original elements to combine other qualities, it is without them, and therefore, like the French, though in a different way, is partial, and without balance. Now, the English race is a compound of a greater variety than any that preceded it. The original characteristic element of the German, viz: the Teutonic, the light mercurial element of the Gaul, found now in the French, as well as other important elements, found in the Dane and the Celt, all have combined to form the English. Accordingly, there exists in that race a more perfect and harmonious blending of all qualities than in any that has preceded it. In it are found the philosophic, the æsthetic, and the practical. The elements were sufficiently varied and comprehensive to embrace all the qualities of a perfect constitution, and the result is shown in the presentation of race combining these characteristics. But the American race has not only been formed from a greater number of races, embracing nearly every prominent variety on the globe, by which the chances for happy combinations have been increased, but those varieties being to a large extent of races more or less cultivated, while the original

elements of most other races were barbarian, have made the ingredients of these combinations more marked and distinctive, and hence the combinations themselves more perfect.

But the increased opportunities for these favorable combinations in the American race, has been owing not only to the greater number of elements upon American soil, but to the greater facilities for their intermixture. In all other countries the distinction of *caste* has greatly hindered the combinations their limited varieties might have allowed; but here, under the benign operation of free institutions, no such restrictions exist, giving among the American people a still greater application of the principle upon which the superiority of a race depends.

But this combination is not only more extensively existing, and finer, thus securing finer specimens of the human race, but because of this greater variety in the elements of commixture—the combinations themselves are more varied, giving rise to a greater variety of talent and character, an element of superiority of race, which a mere glance at the variety of qualification the different departments of life demand, and the evils of that sameness in mental constitution, which most other races exhibit, will not fail to render obvious.

For the same reason that the superiority of a race is dependent upon the variety and character of the elements which compose it, that superiority will be relatively great in the ratio of the nearness of the time at which the mixture took place. The effect of time, where there is no foreign admixture, is to give ascendency to some one class of qualities, the consequence of which is a want of equilibrium and power in the mental constitution, and a general sameness of mental development. This was the case in the Roman race, which, though in the outset a highly superior one, yet not enjoying this constant accession of foreign ingredients, ultimately ran down into feebleness and decay; and the English and French would have long since thus decayed, but for the constant accession of foreign blood. But in this respect, likewise, the American race has had advantages over all others. The origin itself of the race is not only more recent, but in every moment of its history foreign ingredients have been pouring in, giving to it all the benefit of nearness of time in the combinations which form it. In both particulars, therefore, in respect of which the superiority of a race depends, the American race has advantages over all others, and hence is, without doubt, superior.

But in addition to these causes of a mere philosophical character for the superiority of the American race, every influence arising out of the nature of free institutions, and the favorable character of the country itself, which has tended to the development and improvement of the individual man, has conspired to heighten this result.

This superiority, thus demonstrated on philosophical principles, is confirmed by all those exhibitions which have been furnished in all contests of arms with other races, and by its evident higher advancement in all the important departments of human interest.

The wide diffusion of enlightened Christianity among the American people has been another cause of our wonderful national progress.

The original colonists of this country brought with them a high degree of the religious element. This was particularly the case with the Puritans, who settled New-England, with the Quakers, who settled Pennsylvania, and was more or less so with all the other colonies. Starting with a population of this character, with all along an unrestricted access to the Bible, and a full enjoyment of the rights of conscience, it naturally would be expected that Christianity would prevail in a remarkable degree. But when, in addition, the fact is considered that in the equal privileges which all the various denominations composing the church enjoy, all classes are accommodated in their religious preferences, are allowed unrestrictedly to push the claims and interests of their own peculiar religious views, a state of things nowhere else existing, a still further reason is seen that Christianity should have had an extraordinary diffusion in this country.

But while this country has enjoyed a diffusion of Christianity in this remarkable degree—the free competition existing among the various Christian denominations, the effect of which has been the elicitation of truth—the absence of all restriction upon the circulation of bibles and religious books, and any proper modes for the spread of religious knowledge, and the high character of those specially engaged in the propagation of religious light, the result of this high and general appreciation of Christianity, have all tended to make the Christianity prevailing, in a remarkable degree, enlightened, pure and liberal.

If, therefore, Christianity tends to promote national progress, that tendency has been felt in this country in a high degree. That such has been its tendency in this country is evident from these considerations:

Right Christianity, fixing in the mind correct notions of the objects of human life, and of the relations sustained to God and the world, is favorable to correct thinking, and hence to the formation of right opinions and sentiments in regard to all the various affairs of life. In its removal of low and groveling tastes, of bad passions and appetites, it creates dispositions practically to conform to this knowledge, and hence to a devotion to the real interests of life, to that which elevates, refines, and makes life happy, honorable and useful.

Its benevolent feature prompts to enterprises to relieve the needy, to elevate the degraded, and to the employment of such ameliorating processes as secures the constant improvement of the less favored classes. And in this country, where the competitions of sects are unrestricted, it gives rise through their instrumentality to ample educational facilities. Indeed, statistics show that Christianity is doing more, in the schools and colleges it has reared, to secure the diffusion of education, than all other agencies now in operation. And by other instrumentalities which it founds and sustains for the dissemination of books, and the various means of information, especially among the common people, it has contributed largely to the general prosperity of the country.

But not only by its influence upon the intellect of the country, does it contribute powerfully to its progress, but in a not less degree by its influence upon its morals. That sort of conscientious regard for right which restrains men from wrong-doing, where civil law is inapplicable—that sort of integrity which inspires mutual confidence in the various relations of life, in the very nature of things are powerful elements of progress. Their importance is rendered evident by reference to France for example, in which, in a marked degree, they have been wanting. But it is the effect of Christianity to promote these elements. It is evident, therefore, from all these facts, that Christianity in this country, enjoyed as it is in such a remarkable degree, has contributed powerfully to its progress, especially as, from the nature of our free institutions, these effects have been unrestricted in their legitimate power and influence.

Indeed, so powerful is the influence of this great element—so efficiently does it tend to rectify man to keep all his energies within their right channel, that itself alone, under the fostering, protecting care of our free institutions, would suffice to conduct our country triumphantly and gloriously to its highest, noblest destiny.

The motives which prompted the settlement of this country, were unlike those which actuated perhaps all other colonists. The Europeans, who originally colonized Mexico and South America, were influenced mainly by the desire of mere gain. But the motives of those who sought a home within the limits of our territory, were higher and purer, looking in most instances to strictly religious ends. It is not surprising that such a people should become highly prosperous. A nation starting with such motives, and becoming in its onward course the brightest example of religious purity and efficiency, could not fail to propitiate and enjoy the favor of heaven. Such a nation, presenting so bright a spot amidst surrounding darkness and gloom, could not fail to attract the special regard of Divine Providence. But to be the object of the favorable notice and special blessing of heaven, who can estimate the importance of the advantage in all that pertains to progress? To have all that class of circumstances which lie without the sphere of the nation's control, but to whose operations, whether favorable or unfavorable, it is inevitably subject—to have all these directed to the promotion of the nation's weal, a condition of things enjoyed when that nation is the object of divine complacency—who can estimate the value of the advantage to national prosperity?

But while these causes, so well calculated to produce the wonderful progress which has marked our national history, have had such untrammeled and abiding existence, and have indeed effected such wonderful results, yet it ought not to be disguised that as our peculiar social organization and civilization have had time to advance towards maturity, and to assume their own distinctive development, principles and tendencies have begun to exhibit themselves which naturally lead to decay, and which therefore may reasonably excite the fearful apprehensions of the friends of American civilization.

A high degree of the philosophic element, of the capacity for

that kind of reflection and extended generalization which seems to the mind a just appreciation of broad general principles, is essential to every successful form of civilization. In our country, and in all republics, government is maintained not so much by physical force as by an appreciation of fundamental principles, which principles are embodied in the written constitution, and in the established modes of its administration. Not merely intelligence, therefore, but a certain order of intelligence is demanded by free governments. Without it, these great principles being unrecognized, the proper guides of the state are lost sight of, and the government becomes the subject of the caprice of an unregulated, vascillating public.

All successful social compacts demand a constant accession of new truths, of new and pertinent ideas. The original thought, the abstract truth, which emanates from profoundly philosophical minds, lead the way in all progress, and must be in the advance in any prosperous condition of society. As existing ideas are worked up and receive their full development, society, without additional accessions, loses its enterprise and means of progress, and, though it may rest awhile at its attained elevation, it will soon retrograde into decay. It is to this principle that is to be referred the decay of various nations, of which Spain is a distinguished instance. In her palmy days the philosophic element blended with her form of civilization in sufficient degree to secure this necessary condition of national progress; but when, from the vast resources of wealth, and especially of mineral wealth, her newly-acquired American possessions opened up, her attention became engrossed in those material groveling things; the philosophic element losing its importance and its cultivation, these accessions of new truth ceased, and Spain lost her superiority and her glory.

A correct understanding of the doctrines of Christianity, the peculiar exercises their practical realization involve, and especially the application of Christian principles to practical life, in which is implied the system of moral philosophy itself, all likewise demand a prominent development of the philosophical or reflective faculties, a large capacity for generalization, for the appreciation and application of abstract principles.

But in our country, where the popular element prevails, and the standard of knowledge is universally sought to be regulated by the popular apprehension—where, from the abundance of external resources, there exists none of that stress of circumstances by which, men being thrown back upon themselves, the higher powers of the mind are taxed and brought into use—where the impatience and restlessness of the people, and especially of the youth, the result of the habits of self-indulgence, and the early period of the transition to manhood conventionally established, are fatal to all plans of extended education, of patient, laborious, protracted mental discipline, necessary for such development and training of these higher powers as will give them prominence and influence in the general tastes and pursuits of the people—where, indeed, the utilitarian, *practical* spirit of the age so incorporates itself into the meagre system of education that does exist, as to divest it of all the power it might otherwise have

for the cultivation of these higher powers of mind, it is not to be expected that the philosophic element will find that culture necessary to the maintenance of its proper place among the mass of the people, but, on the contrary, must assume a gradual decline.

That this decline has already begun to exhibit itself, existing facts abundantly prove. No longer does the public mind hold first in importance those abstract principles, which constitute the foundation and frame-work of our peculiar government, and by which its genius is determined. Such a characteristic is contemned, and often derided as metaphysical and impracticable. But, rather, expediency and *practicalness*, as determined by the *immediate* bearings and consequences of measures, are the only points surveyed in the determination of political questions. No longer are statesmen appreciated as in the days of Jefferson, Hamilton, Madison, and Jay, for their profound acquirements in the philosophy of government, and the weight they give to the great principles of the constitution in all their political sentiments and policy, the result of a profound capacity, justly to appreciate and construe those great principles; but brilliancy, the power to captivate and sway the people by specious declamation and the charms of a striking elocution, are the most favored passports to public promotion and influence. Authors of deep originality, whose pages everywhere abound with specimens of the widest, truest philosophy,—who, indeed, as the originators of new truths, extend the boundaries of knowledge, and are properly the great teachers of the age, are scorned as visionary and unintelligible; while writers who, for the very reason they are destitute of the highest attributes of mind, dealing in topics secondary in importance to the great problems of human life, but accommodated to the apprehension and tastes of the common mind, are everywhere admired and embraced as the true prophets of the age. Writings, whether old or recent, whether found in books or reviews, abounding in deep, comprehensive thought, and spreading out to the gaze of the thoughtful the profoundest acquirements of research, the deepest lessons of wisdom, and the brightest illuminations of a true, all-embracing philosophy, and that, too, upon subjects relevant to the times and the existing wants of men, are unpatronized, neglected, despised; while the Pen-and-Ink Sketches, the Hurry-graphs, the Random Shots, the Passing Glimpses—crude, meagre, undigested, impromptu productions of the superficial, teeming from the press in the form of books, periodicals, newspapers,—constitute the staple reading of the country. Indeed, philosophy, as that term signifies great abstract principles, and those principles in their application to the great problems of human life, finds but few admirers in our favored country; and none encounter denunciation more unsparing, and ridicule more bitter, than those who have caught its spirit, and manifest its teachings in their public exhibitions.

Another ground of apprehension in regard to the permanence and success of American institutions, is found in a decline in a proper regard for the tenure of liberty. Our forefathers knew from bitter experience the value of liberty, and in their political opinions and con-

duct were mainly influenced by this consideration. They knew what was involved in the want of liberty, and the difficulties of its acquirement. It was not, therefore, to be expected that they would do anything to forfeit liberty. But our generation, inheriting from their birth this happy condition, and knowing from experience no other, are without opportunity to learn from contrast its inestimable value; and for the same reason, together with the fact of the steady success of our institutions, are without any salutary apprehension of the possibility of its loss. Our people, therefore, give but little attention to the tenure of their liberties. But such a state of things must necessarily be full of danger to our institutions. In our country, where there is nothing but the controlling power of principle to keep government within its legitimate sphere, and to secure uniformity to its general movements and policy, the absence of this great guiding conservative spirit, the real foundation of all free governments, necessarily involves an abandonment of the government to the mere chances of accident and caprice. The effect of the declining influence of this spirit is already seen, in the formation of parties upon principles, and looking to ends, not having respect to the true interests of the country, but rather to selfish results, giving rise thereby to political corruption, and a general depravation of the moral sentiment of the country. Still further is it seen in a general looseness of opinion as to the objects and policy of the government, appropriating its powers to the accomplishment of any favorite schemes of personal interest, and recklessly wielding it to any designs at home or abroad, which passion, prejudice, or any visionary theory of human amelioration may suggest. In short, it is seen in the growing unpopularity of all treatment of and reference to the principles of the constitution, growing out of the irksomeness of their hampering, restraining influences, and a general carelessness of the effects of measures upon the integrity and security of those principles. It is true the American people love liberty, and in any final contest in which its safety was involved, would defend it to the utmost; yet the danger is, that through this recklessness of its tenure and the increasing tendency to its abuse, the government will at last be swung so far from its true position, that any exercise of this affection may be unavailing for its restoration, and in spite of it, our free institutions will fall into ruin. Our country is not, even at this early day, without examples of the dangerous consequences of this growing evil. Already has government, in a reckless disregard of her true functions, been sought to be wielded to sectional oppression; and even now, with a vain belief of the omnipotence of the nation and its necessary perpetuity, in its present free and prosperous condition, in any circumstances of opposition and peril, is the dangerous experiment, new in our history, and contrary to its settled policy, sought to be tried, of making it the umpire and dictator of all other nations.

There is a growing demagogism in our country that is destined to endanger our institutions. Men of the highest popular talent, especially in this day, in which public speaking is so common, and, indeed, a demand for the attainment of all grades of office, can attain a controling influence over the public mind. But when once attained,

such is the charm of their names, that with their opportunities of access to the popular ear which the hustings afford, and in the absence among the people of any sensitive regard for the integrity of our institutions, the political direction of the people is almost entirely subject to their dictation. But such is the insidious corrupting character of political ambition, that many of these men, thus given up to its sway, are for the most part selfish in their aims, and are restrained in their efforts to compass these aims by no law, but the fear of the forfeiture of the position already attained. In this power of control over the masses, thus held by a few, and which is so liable to be wielded to corrupt purposes, there is just reason for the apprehension of radical evil to our institutions and general national interests.

There can be no doubt that the practice of public speaking for office, and as is the custom more recently for the highest offices, is destined to work the most serious harm. It gives to a few men undue influence, and that, too, as oratorical ability is not generally accompanied by the soundest judgments—men not the most safe and reliable in council—while it closes the way to preferment and influence of men who are without the gifts of oratory, but who, from the ripeness of their judgments, the extent of their acquirements, and the integrity of their characters, have the highest capabilities for public usefulness. It gives, too, increased facilities for political combinations and for increasing the tyranny of partyism; and hence, for the perpetration of all the mischief resulting from the forcible direction of the masses to corrupt and selfish ends. And as eloquence is destined to be increasingly used and increasingly potent as an instrument of political ambition, these evils are destined to be felt in increasing weight upon the country. Already they are seriously felt in the scheming and trickery, practised in high political life, for the high offices of the government, of which the people have occasional casual intimations, and which plainly show the extent to which the country is subjected to a corrupt political demagogism.

There are various social evils that are gradually diffusing themselves, which are calculated to work much harm, as well to our institutions as to our form of civilization.

There is in some sections of our country a species of religious fanaticism, the result of a good degree of the religious element, unchastened by common sense and the light of the Bible, that, taking a partial and perverted view of religious obligation, assumes the ultra ground, that every man may determine the extent of his allegiance to civil government, and is therefore competent to set aside the obligations of government in the pursuance of any extravagant notion his own disordered fancy may suggest. An assumption not only at war with all government, but which in ours, the result of mutual concession and compromise, must result in revolution and anarchy.

In a country like ours, enjoying the largest amount of civil liberty, and abounding in all the means of easy living, and fostering consequently habits of self-indulgence and personal ease, there is almost necessarily a spirit of insubordination, of restlessness, under the restraints of law. This spirit, thus growing out of our political condition, is strengthened by the lawless manner of youthful training itself, the

result of our peculiar social condition, a manner involving the reversal of the order of nature, and likewise by that absence of all reverence for the past, and general spirit of disloyalty to established principles, and forms the general characteristic of the age throughout the civilized world. Such was not the case in the early period of our government, when the sturdy, self-denying, law-abiding virtues prevailed. But it now manifests itself in all the departments of life, civil, social and religious, presenting every where a condition of affairs most unsafe for successful government, and destructive of the chief conservative element, both of church and state.

In no country will the socialist principle, of an equality of condition as the right of every man, have more chance for ultimate prevalence than in ours. The very equality of political rights guarantied by our civil institutions naturally suggests this notion. The political importance of the lower classes, and the consequent pandering to them of political aspirants, fosters it; and the foreign element of our population, among whom this sentiment, from the reaction of political views, the result of their altered political condition, so generally prevails, contributes to its acceptability and influence. This agrarianism, in some of its specific forms, already has extensive prevalence. Already is the doctrine proclaimed, of the political right of the poor to support from the rich; and already has it been practically embraced in some quarters, by legislative enactments in their behalf in the shape of exemptions, bounties, and other forms of special protection. And even in the high precincts of the National Assembly the doctrine is seized upon for partisan purposes, and practically acted upon, in the recent system it has adopted of extensive appropriations in the form of gifts of the public property of the nation. The danger is, that this principle, thus recognized and favored with all the facilities for growth and expansion our peculiar condition affords, will gradually diffuse itself through the public mind, until, reaching its full limits, it will assume its place as a controlling element in our social condition, and consequently effectually change the whole character of our institutions.

But while the country has much to fear from these evils, especially in their progressive growth, yet to the patriot it is a source of the most heartfelt self-gratulation, that there are still in our happy constitutional provisions, and in the frame-work of our social fabric, elements of a conservative character, in addition to those fundamental causes of our national prosperity already adverted to, most of which are destined still to operate beneficently, that justify the hope of a yet long and glorious future for our country.

The relations of the states to the general government established by the constitution, will, if properly observed, prevent many evils that might otherwise jeopard the perpetuity of the government. Under this arrangement, the sphere of the general government is so restricted, as that it can never become a burden either by invading the rights of particular sections or classes, or by any general system of oppression; while the absence of necessary government functions, which this restriction would otherwise involve, is amply supplied by

the powers of the state governments, which, having more immediately a local bearing, leave no interest without its rightful protection. Whatever oppositions of interest or opinion may exist between different sections, this system, properly observed, excludes them entirely from the sphere of the general government. The causes, therefore, which have often rendered other governments oppressive, and led to their overthrow, this system provides against, while, at the same time, it is none the less adequate to fulfil all the purposes which government is designed to subserve.

There will be, without doubt, growing out of the various causes of decay already stated, all of which impinge on the fundamental principle of this system, and likewise out of the contrariety of sectional interests, strong influences existing, tending practically to set aside this cardinal feature of our national constitution; yet there will always exist a strong counteractive tendency in the fact of the clearness in which it stands forth in the written constitution itself, and in the additional fact that there will always be a portion of the country —that is, the weaker portion—whose interest it will be, most firmly, to maintain it.

The doctrine of states rights is, indeed, the great conservative element of our system of government, the balance-wheel by which alone the constitutional adjustments of the system are maintained, and the operations of government so restrained, as to be incapable of working change in our institutions. Securing the great principle of concurrent majorities, so necessary to wholesome restraints upon the powers of government, it is the only protection to minorities against sectional aggression and tyranny.

The vastness of our territorial extent will be exceedingly favorable to our national permanence. The dangerous increase of responsibilities, and the general unwieldiness that might be supposed to result, are obviated by the division of this vast territory into separate states, by which the business of local legislation is thrown upon local legislatures, while the general government has jurisdiction only over those general interests which, as they are common to all sections, are comparatively few and free from all the necessary causes of dangerous collisions. Indeed, this increase in the diversity of sectional interests, and consequent multiplication of concurrent majorities, by increasing the number of checks and balances in the operations of the government, is, in itself, a powerful safeguard to national permanence and prosperity.

A dense population is one of the greatest evils a republican government has to fear. It is only in such population that social evil has opportunities to propagate itself to any fearful extent. Ultraism and humbuggery flourish nowhere else. The collision of interests, the result of this multiplication of the points of contact between men, originate and present facilities for the indulgence of criminal passions and purposes from which sparser populations are comparatively free. Dense populations always present a larger class who are seeking to live by fraud, and without legitimate employment, and among whom are to be found the worst elements of discontent and insubordination.

Indeed, all elements of mischief having, by the opportunities of combination and concert, afforded greater facilities for development and propagation, are more to be dreaded in this condition of society. These evils, incident to a dense population everywhere, will be necessarily felt to a greater extent under the relaxed, indulgent system of a republican government. Indeed, since the execution of law under this system is dependent more upon public opinion than the intrinsic authority of law, it is easy to see that these evils, in many communities, might be free to develop themselves without restraint.

But from this unhappy condition of society, which has been the bone of the strongest governments, and which is so illy suited to ours, the ample extent of our territory must continue to relieve us. Men will not submit to the inconveniences of a crowded population, when the opportunities for less restricted situations are abundantly afforded. They will disperse into ampler fields, where, free from the vices and the excitements of an unhappy social state, they will enjoy ample facilities for the improvement of their own condition, and the cultivation of the virtues of upright, useful citizens.

The vast extent of our territory will still further contribute to our national prosperity, in that it will continue to furnish, to the largest possible extent, all the natural advantages for easy living. A country that affords the means of easy living, of rapid improvement in individual and social condition, need not apprehend danger to the government from the people. Happy themselves, and buoyant with hope, they are content with the government. They are its friends and supporters. This is particularly true, when, from the nature of the country, the agricultural interest preserves its just predominance; since, while in this state of things the country is relieved from real dependence upon foreign powers, and consequently from all those entangling, exciting questions of foreign policy which a dependent state might involve, there is something in the nature of agricultural employments, which, tending to isolate and to individualize, frees from the distracting, demoralizing influences of an intensely social life, and cultivates those sturdy, substantial qualities, that native force and strength of character, the proper foundation of a stable republic. These abundant external resources invite the attention away from the imaginary evils of the social state, forestall those demands for protection from government which in other countries it is thought to be its prerogative to bestow, and relieving it thereby from the clamors of corrupt selfishness and restless discontent, free it from those dreaded sources of danger.

This vast extent of country, multiplying and diversifying the resources of the c untry, increases its independence of other countries, augments its power, enlarges the sphere of social improvement and enjoyment, elevates and expands the individual as well as the national mind, and in every way widens the basis of national permanence and progress.

The purposes which the Almighty evidently designs to subserve, through the instrumentality of the American nation, authorizes a confident belief that it is yet destined to a long and increasingly glori-

ous career. Brought into existence just at that period when the world had begun to rise to that intellectual and moral eminence, and to enjoy, through the widening range of commerce and enterprise, guided by science and well-regulated intelligence, that extended intercourse between the various portions of the earth which would give to a great and prosperous nation the utmost facilities for impressing itself upon the world; starting with a population uncommonly free from the errors of former and elsewhere prevailing systems, and which has developed, in every step of its career, the elements both of mind and heart most approved of Heaven, and best calculated to supply the demands of human progress; occupying a geographical position with reference to the nations of the earth, which the condition of the rest of the world would naturally indicate as most favorable to adjust its capacities of usefulness to the wants of mankind—the indications are unmistakable, that the providence of God has marked out for our nation a career of usefulness as broad and as grand as the interests of the world, and whose duration, therefore, must be commensurate with the magnitude of these appointed results.

Here, in this favored land, is to be illustrated in living, actual example, those benign institutions of civil government which give freedom and elevation to man; that system of religion, which, coming directly from God, brings the individual man in direct relationship to his Maker; teaches him the whole range of his responsibilities, and invests him with the efficient motives for their successful performance, and that intellectual emancipation in which the mind, untrammelled in its aspirations, is urged by all the power of its own spontaneous activity, and the encouragements of enticing reward to every field of inquiry and improvement. The world around us is struggling for freedom from intellectual and physical shackles, that it, too, may enter upon this high and glorious estate. It is not by actual interference that we are to assist in this struggle. It is not physical, but intellectual and moral aid, which the world in the present crisis demands. These are the weapons by which alone advancing nations can secure their preparation for, and successfully assert their claim to, the glorious emancipation we enjoy. It is, then, by our own brilliant example, standing out, as it does, midway the world, and offering conspicuously to the gaze of surrounding nations the glorious exhibition, and the hope of a higher, happier state, that we are to secure to the world the redemption they need, and to usher in the era of happiness to universal man. This, then, is the mission to which Providence has assigned the American nation, and this is the mission which, even now, it is most gloriously fulfilling.

May we not hope that our national existence is destined to a continuance as long as the duration of this field of usefulness; and that its power and glory will ever correspond with the increasing extent and grandeur of the world's susceptibilities of elevation and improvement.

The relative position of the United States to the nations south and west of her, which embrace the largest portion of the inhabitants of

the globe, point her out as destined to effect the most important and permanent results in the history of the world. It was in the East that civilization first began. Gradually it has extended itself westward, but always developing itself in each step of its progress in ampler proportions and brighter light, until at last, in noontide splendor, it has displayed itself upon the American continent. But in every case it has been by colonization, and the consequent amalgamation of races, by which the aboriginal race was supplanted, that this western march of an increasing civilization has been realized. The capabilities of improvement in any race are circumscribed by definite limits. And if the regions of South America, of the Pacific Isles, and of the vast continent of Asia, are destined to become the seats of a civilization higher than any now enjoyed, which, as an inference from the general course of its progress hitherto, and the apparent design of Providence, seems quite certain, it must be by the infusion of elements, both of race and of knowledge, the offspring of a people and of a civilization elsewhere existing. The relative position of the United States to these vast regions designate her as the instrument by which these conditions of this advancing civilization are to be fulfilled. Already has she, by a rapid course of colonization, supplanted the inferior race of her recently acquired Pacific territories, and with one rapid bound extended the western limit of her own noble race and civilization to the very shores of the Pacific. Thus even now is she brought into immediate contact with Mexico, South America, the Isles of the Pacific, and even Asia herself. It is not difficult to perceive that a people, so active and enterprising as ours, with all the facilities for immigration and colonization in respect of these regions—which an increasing commerce and a widening international intercourse, promoted by the remarkable improvements which the modes of transit of later times will secure, will not be long in spreading in the midst of these regions. But wherever they go, this inferior native population, as the result of amalgamation, and that great law of contact between a higher and a lower race, by which the latter gives place to the former, must be gradually supplanted, and its place occupied by this highest of races.

It is highly probable, therefore, that in the revolution of years the descendants of the American people, still higher elevated in the scale of being, and possessing the vast treasures of a glorious civilization, and the blessings of a saving Christianity, will occupy the entire extent of America, the rich and fertile plains of Asia, together with the intermediate isles of the sea, in fulfilment of the great purpose of heaven, of the ultimate enlightenment of the whole earth, and the gradual elevation of man to the dignity and glory of the promised millenial day. Results so far reaching and grand, require for their realization a lapse of time, and an extent and grandeur of means that bespeak for our country a yet long and glorious career.

A country so abounding in all the elements of permanence and prosperity, so elevated by the dignity and grandeur of the objects to the realization of which it is committed, and yet containing in itself

so many of the seeds of decay, must devolve upon its citizens the most high and sacred duties.

In those countries where the responsibilities of government are confined to certain classes, that part of the population excluded from those classes being without power to impress themselves upon the government, may be excused from the duty of familiarizing themselves with its principles and operations. But in our country, where every man may exercise an efficient agency in the machinery of government, and where the entire sovereignty is but the aggregation of the individual sovereigns which compose it, the obligation to study the constitution of the country and the proper modes of its just administration, presses with the utmost sacredness upon every freeman. It is not enough that American citizens should have a mere superficial acquaintance with the general character of the government and the history and interests of parties, such as may be derived from the common newspapers and political speeches of the day; such knowledge both misleads and renders its possessor the more susceptible of delusion by the ambitious. But the constitution itself should be read and studied by every one for himself; its principles, and their mutual relations as a regular system, should be clearly apprehended; and the history of the application and the operation of those principles, as exhibited in the entire history of the administration of the government, should be the object of constant attention and inquiry; so that every man, not depending upon others for direction in his political sentiments and action, should be able to determine for himself intelligently, by reference to the fundamental principles involved, all questions in the solution of which he as an American citizen is interested. Such a course is necessary to elevate the masses above the delusions of the designing, and to secure to every man those high qualifications of intelligence and statesmanship which the theory of the government both presupposes and demands. No American should be without a printed copy of the constitution of his country; and, as the great chart of his liberties and immunities, it should be the text-book of his constant reference and study.

That independence of judgment and of conduct, which holds well settled opinions of the constitution and political policy paramount to the interests of party and the claims of men, is the essential quality of true American patriotism. Without it, the individual man is so hampered and restrained, as to be incapable of that enlarged and symmetrical development and progress which our wise and liberal system of government is so well calculated to secure. Without it, our government, instead of being the expression of the people's will, will be in effect but an oligarchy, the instrument of the ambition of bold aspirants. Without it, indeed, the constitution itself will cease to be the political directory, and only referred to and used as an auxiliary to power and influence.

An enlightened public spirit, which seeks to make the country prosperous and happy, by the development of its resources and the multiplication of its conveniences and enjoyments, it is the sacred duty of every American citizen to maintain. Such a spirit, thus practically

exercised, necessarily promotes the well-being of every citizen directly, and likewise indirectly by that security and permanence which the general support of such interest necessarily secures to the whole nation. Enterprises designed to forward the interests of Christianity, of public education, of commercial and industrial pursuits generally, on a scale of the highest magnificence, embracing the claims of the far-reaching future as well as the wants of the present, should engage the attention and co-operation of every free American.

Finally. Recognizing the existence of a great superintending Providence, which guards and directs the interests of nations, and especially of one so evidently designed to compass the grandest results of usefulness in the world's history as is ours, every American should not only, by an enlightened consultation of the providential bearings of the nation, seek to conform his own course of action to them, but, if he be a praying man, should constantly hold the vast interests of the nation before the throne of Divine grace, and secure, by the power of his own personal interest there, the protection and guidance of the Almighty in the onward destiny of our beloved Republic.

Thus, blessed with such glorious elements within, and surrounded by such favorable circumstances without, the hearts of the American people may justly swell with triumphant anticipations of the increasing power, prosperity and usefulness of the nation.

ART. VI.—HISTORICAL AND STATISTICAL COLLECTIONS OF LOUISIANA.

THE PARISH OF CATAHOULA—(*Concluded.*)—BIRDS—FISHES—AGRICULTURAL PRODUCTIONS—EARLY STEAM NAVIGATION IN LOUISIANA—LEVEES—RELIGION—EDUCATION—VITAL STATISTICS—BIOGRAPHY—CHIEF TOWNS.

BIRDS.—Having disposed of the animals, we will next notice a few birds which are not very common in this section of country; and the statements here made are entirely from observations made by others. *Ravens*, of a large size, found in the vicinity of Catahoula Lake, said to be as large as the carrion-crow. *Jackdaw*, in same place. *Paroquets* were once quite numerous, but of late they are only found in remote places. *Whip-po-wils*, of two kinds, designated by the names of Spanish and American. The former is larger and more clumsy in its make, and brown all over; the cry of this kind is "*chick-will's-widow*;" these also rear their young here. The latter, or American, is of a more comely appearance, brown on the back, with some white feathers in the wings; they migrate northward, and their cry is "*Whip-po-wil.*" It is probable that these may be only the differences between the males and females. *Goldfinch*, a small bird, with dove-colored back and yellow breast and belly, rear their young here. *Cormorants* or *Corvorants*, of two kinds. *Wild Geese*, of two kinds. The reader is referred to the report from Concordia for other kinds of birds.

FISHES.—The only kinds peculiar to these waters is the *Toad Fish*, which is found in Catahoula Lake, and bear a striking resemblance to the *Stingaree*, having a flat circular body, large eyes, close together, and having a tail and feet resembling the Tadpole in its transition state. The *Pike* is found plentifully in the creeks of the pine hills. The *Trout* is very nu-

merous in same place. No streams furnish better fishing than those in the pine hills. Hundreds have been caught in a few hours with hook and line, while with the *drop-net*, many bushels have been secured in a very short space of time. Fishing parties and pic-nic parties afford great amusement in the summer months, when the citizens from the swamp resort there to enjoy the delightful breezes and spring water, which are so cheering and healthful. While the lake is full, the fish in the creeks do not bite so well; in fact, that is the season when they are "not at home," but far away, roaming the lake and deep waters; but when the water is falling, they resort in countless thousands to the cool creeks, where they are caught in great numbers, and can be seen in the transparent waters in immense schools, ready to seize the bated hook.

AGRICULTURAL PRODUCTIONS.—Under this head, *Cotton* takes the first rank. This was raised in small patches by the earliest settlers in 1796, or earlier; but at that time there was no such thing as a cotton gin in existence, and the few pounds of the staple raised were spun by the females in the family, and woven for home use; and if we of the present day could see some of the fabrics of these industrious pioneers, we would be astonished at their proficiency, and blush at our own idleness and supineness. Then, the thrifty housewife was skilled in all the arts of dyeing and coloring, in all the subtle mixing and combining of shades and tints which now are left to the foreign manufacturer. Then, nearly every article of dress and bedding was made at home, and even the floor was carpeted with the thick, comfortable rag-carpet, made by sewing scraps together in long strings, which were rolled into immense balls, and served as the filling for the strong warp, which would last for years, even with constant use. Then, the cheerful hum of the spinning-wheel, the laughing sound of the cotton cards, and clattering thump of the busy loom, accompanied by the merry song of the pretty maid, or more sedate matron, all betokened contentment and independence. Well do we remember those days long since past, never, never to return! Then, we were called from our childish sports to "fill quills" and "hand threads in the harness," sometimes to keep a little slow fire on an oven lid under the warp, of a damp day, so as to keep the sizing dry. Then, again, to pick burs out of the wool, or help wash the cotton and form it into cakes "to make me a shirt," or fill the large greedy spools of warp which seemed as though they never would "get full." Again, the broaches had to be hanked, or reeled, and glad were we to hear the old clock reel begin to screech the premonitory sound before the cheering *clack* would warn us to tie the *cut*. All these things are as familiar as the scenes of yesterday; and with all those toils standing out boldly before us, still often, very often, the words come unbidden to the lips—

"Oh, would I were a boy again!"

But we are wandering in the mazy paths of childhood—in that far-off dream-land where poets love to roam—but must hasten back to the stern reality of our subject, which is the culture of cotton—a theme which has caused the shedding of as much blood, sweat and ink, as any other which has existed for only fifty years. In the time we speak of, i. e., the few last years of the past century, and upwards, to about 1810, the *black seed* cotton was the only kind raised here, or, in fact, any where in our country. This was not so productive as the Tennessee *green seed*, which came into use about this latter date. Negroes could not pick more than one hundred pounds of the *black seed* cotton; it grew very large on the rich lands, and the bolls were apt to rot before opening; and besides all, the yield of lint was very small to the amount of gross weight. The common way of

planting them was in checkers, or hills, about four feet one way, and a foot and a half or two feet the other, and even then the limbs would interlock. The little *green seed* was harder to pick than the black seed, and also harder to gin on the roller, or saw gin either.

We give here an extract from the Cotton Book of G. W. Lovelace for October, 1817, when he raised the green seed cotton. He was a good thrifty planter in his time, and had some choice negroes; and here now is a specimen of their day's pickings for one week:

	Mon.	Tues.	Wed'y.	Thurs.	Fri.	Sat.	Totals.
Sally	57	49	58	51	52	58	325
Bill	66	55	56	59	58	57	351
Charles	46	45	48	54	55	62	310
Elsy	31	37	26	28	31	39	192
Nancy	42	49	54	53	42	53	293
Dave	19	20	18	22	27	23	129
Harry	68	68	44	69	78	78	405
Joe	34	41	50	51	49	52	277
Lewis	23	38	34	33	44	43	215

On looking over the same book for the month of December, when the weather was colder, there is a proportional falling off in the picking. Probably if those same negroes could now be put in our cotton fields, they would pick as much as our best negroes; whereas, here we see that the best picker, in a whole week, got only as much as thousands of negroes now can pick in one day. The cotton was grown on the rich bluff lands of Sicily Island, and was as good as any then in the world.

In early times it was a very common, in fact, the prevailing practice, for heads of families to make the children all assemble around the fireplace at night; and each one had his task to do of picking out the seeds of the cotton for the purpose of getting it to spin, as this kind was much better to spin than that which run through the roller gin, or even the saw gin of more moderate date. The usual task for a lad to pick, between supper and bed-time, was as much as could be crammed into a pint tin cup. One old gentleman showed me his blackened and cracked thumb-nails, and assured me that it was caused from picking seeds out of cotton when a boy.

Indigo was raised in those days in considerable quantities, but only for domestic purposes, and not as an article of commerce.

Wheat was raised also at one time in much greater abundance than now. Mr. Anguish Buie raised largely every year, and ground it on the common corn mill-stones then in use, which were turned with a staff by hand.

Tobacco was raised in much greater quantities then than now, and put up in what was called *carots* of about four pounds weight, which sold for a dollar. These carots bear some resemblance in shape to a huge segar; and are frequently seen now amongst the French population of our state. Col. Hooper, of Rapides, has all along raised tobacco in the pine hills on Big Creek, and makes many thousand segars annually.

Rice has always been a constant product here, in small quantities, for domestic consumption, and invariably makes a fair yield. The red rice is said to yield very well on bottom land and what is called "craw-fish land."

Rye also does well here, but is not much cultivated.

Flax was raised in considerable quantities before cotton, and cotton fabrics superseded it. Some of the settlers on the island made a good deal of it.

In speaking of cotton, it should have been stated that during the past spring and summer, the *cut-worms* were very bad on the island. Mr.

Clark, who lives at the head of the lake, assured me, that in one week, with ten hands, he picked up off and scratched out of the ground, 36.000 cut-worms, as he counted each hand's pickings himself. The manager on Dr. H. J. Peck's place, said he picked up 43 of these worms himself from under one single cotton stalk in the month of June. They injured the cotton crops there very much. Col. W. M. Tew says, that the disease called the *rust*, appeared in one particular spot, in a cotton field of his, in the summers of 1846, 1849 and 1851; although, in the intermediate years, corn was planted in the same field. It always makes its appearance at that one place first, and then seems to spread from that and appear in other places. He wishes for some light on the subject. There is one thing that attracted the attention of many in the growing of this year's cotton crop, which was the fact, that on the lands which lay fallow after the subsidence of the high water, and were not broken up till in the spring, the cotton was small, and never grew off like that which was planted on land which had been worked last year after the water went off. The difference was perceptible to the most careless observer, even the very row pointing out the line of demarkation.

Cotton Gins. Before the invention of the saw gin, the people used the little roller gin, consisting of two upright pieces in which two horizontal cylinders were fixed and turned by a crank, which was worked by hand, or by means of a strap and paddle moved by the foot; the first named cost $3, the latter $5. Mr. Elias Carter made a great many of them.* These required two hands to attend them, or sometimes three, viz: one to turn the crank, one to feed, and one to stand behind with a sack or basket and pull away the lint. It is surprising to think how soon the saw gin was brought into use here, after its first invention. The first saw gin and gin house in the parish was put up for John Henry, on what is now known as the Troy place, at the mouth of Little River, about four hundred yards up from the junction of the two rivers. The *exact* date of its building cannot be ascertained, but it was 1804 or 5; nor can the names of the mechanics be ascertained, but it is hoped that these facts may come to light. This gin, was very small and light, requiring only one small horse to turn it. Cotton was brought to it from Catahoula and Bœuff prairies, and it was quite an object of attraction and amazement. A gentleman assured me that he was there to see it in 1808 when he was but a lad, and on entering the door of the gin, the brush-minder, who was a stout Irishman, came rushing out towards him all covered over with the downy lint. Mistaking him for some portion of the machinery, he turned to make his escape from such impending danger, when he caught sight of the features of the smiling paddy, who was enjoying the sensation he was producing upon the frightened boy.

The next gin was put up for Edward Lovelace on Sicily Island, at the head of Lake Looah, in 1807. He and his brother got outt he house timbers and did most of the work in framing, covering, &c., which was attended with a great deal of trouble, as they had only a few oxen (three

*Mr. E. C. also made looms for the people. For a full framed loom he charged $10, while for one which was fastened up to the side of the house, and not made out in full, he only charged $7. Judge Taliaferro tells an anecdote of Mrs. Carter, the wife of the gentleman here spoken of. She had a large quantity of wool which was full of burs and very hard to clean; she thought a great deal about it, as she was anxious to put a piece of cloth in the loom. One night she *dreamed* about it, and dreamed that she could clean out the burs by running the wool through the roller gin. Next morning the first thing she did after rising, was to test the practicability of her dream, when she was gratified by finding it come up to her most sanguine wishes. It became generally known and practised by all her neighbors. It is well known that wool may be easily cleaned this way in the saw gin.

yokes) to haul the timbers, and lacked many other things. At that time, iron cost a great deal, and most of the nails used were wrought out on the anvil. They were nearly two years building the house and getting the machinery completed. Shadrach Taylor made the running gear and the wood work of the gin-stand; while James Wright made the saws and all the iron work. This gin had fifty saws, and *every part* of it was made there on the ground by these two workmen. There was great joy and rejoicing when it was all completed and set in motion. This gin stood for many years and ginned for all the country round. Cotton was taken to it from Catahoula and Bœuff prairies by boats, even as late as 1835.* Up to 1810 it was the only gin in the country that was kept in constant repair, for that of Henry's was frequently out of fix, and even in 1812–13, was abandoned. In 1810, the cotton book of Lovelace shows the entire crop of the country around was only 243 bales; in 1811, 249 bales; in 1812, 231 bales.† After that, their ginnings diminished, owing to other gins being erected. They furnished their customers with bagging, rope and twine, and often shipped the cotton in their own name, rendering an account of the proceeds to them. They had a full store at the same time, and did nearly all the business in the country. James Stokes built a gin in the town of Harrisonburg, in 1813, which was burnt down by an incendiary in 1819.

The first gin on Little River, after Henry's, was put up for Dr. John McBride Thompson, in 1834, by McClennon and Cornwell; the running gear was made by Peter Row, and it had a Carver stand.

The first gin put up on Black River, in this parish, was for P. D. Mason, in 1837, by Ferrill and McCamish; Peter Row made the running gear, and it had a Carver stand. The house is still standing on the place now owned by J. Metcalf, four miles below Trinity.

The first *water saw-mill* in the parish was built on Hemphill's Creek, in 1806, for Mathew Stone, by James Brownlee. It was about five miles from the bay where Captain G. Spencer's saw-mill now stands. The next was put up where Spencer's mill now is, by Brownlee, Elias Carter and John Clarke, for themselves, in 1808-9. They accidentally found the situation one Sunday evening, and soon bought the land around there from Edward Bullen, without intimating their designs to him, or any one. They went to work under many disadvantages, and soon raised the mill, and set it going.

This is still one of the best mill-sites in all this section of country, and millions of feet of lumber have been made and sold here.

Zacharias Taliaferro built a large double mill on Gray's Creek, in 1816-17, having two pier heads, running two separate sashes, with two saws in each.

The first *steam-engine* was put up on Black River, in 1839, by R. C. Martin and Henry Shriver, running two saws and a set of mill-stones. This mill, or the machinery, was moved, in 1849, into a large house in Trinity, so as to be in a more central place. It is now owned by H. Shriver and John M. Philips. It will cut 30,000 feet per week, without any serious drawback, and the stones *could* grind 250 bushels per day. The whole mill is worth $12,000; it requires 12 hands to work it to advantage, and their hire is $17 per month: one yoke of oxen, valued at $50, and the logs cost $1 25 each; the lumber sells for $12 to $20 per M., according to quality.

Joseph R. Carter had a *tan-yard* in Catahoula prairie as early as 1812. Jacob Lanius had one in 1816, here, near Harrisonburg. Moses McDaniel

* It was burnt down in 1829, but soon another was put up in its place.
† The entire cotton crop of the Parish in 1849, was 6,608 bales.

and Joseph Francis established their tannery here in 1844, and still carry on the business.

Lacey, and Henry Guthrie, and Charles Craig, were *hatters* here from 1810 down to 1820. If a person would furnish either of them with 16 fox-skins, or the same number of raccoon-skins, they would make a hat which would last, with constant wearing, for ten years.

Rezin Bowie put up a whiskey-distillery on the Bayou Bushby in 1803, and made several barrels of whiskey every year for some time. After cotton began to attract attention, he quit the still and raised cotton. The surplus whiskey which he could not dispose of to the neighbors, he generally put on keel-boats and shipped to New-Orleans, or the coast.*

The first *steamboat* that ever ran up the Ouachitta River was called the "JAMES MONROE," and was commanded by Captain Nancarrow, in 1819. She was a rough piece of work, and had a mast and sails. She ran from New-Orleans to Harrisonburg in twelve days, and great was the wonder of the people at her astonishing speed, and they congratulated each other upon their being brought so very near to New-Orleans. The "James Monroe" ran on up to what was then called the "Post of Ouachitta," and her advent there created such great excitement, that the whole population made a general grand jubilee; and, as commemorative of the great event, and expressive of their joy on the occasion, they changed the name of their town from "*The Post of Ouachitta*" to that of "MONROE." The second boat up this river was the "*Independence*," in 1820-21, commanded by Captain Rarich. This was the first steamboat that ever ran into Bayou and Lake Looah, which was the same winter, and before the Bayou was cleaned out.

The next boat was the "Leopard," in 1822-3, commanded by Captain Raspellier. This boat was rather an ungainly piece of work, and had a wooden main-shaft. She ran as far as Camden, and made about two trips of a season, and seldom made the distance from New-Orleans up to Harrisonburg in less than twelve days. Some of the old folks say, on her upward trips, they could get out and walk along the bank of the Mississippi River and keep far ahead of her. Sometimes they would get out and dance all night at a French ball on the coast, and mount horses next morning and soon overtake her. About that time there was a good deal of talk and discussion about moving the state-house, or seat of government, and all the members of the legislature, from the different parishes, were proposing to move it to their several sections of the state, when the Hon. J. R. Grymes, in order to ridicule them, proposed that they should charter the "Leopard," and constitute it the *state-house*, and go peddling over the state from parish to parish, so that *all* might have a benefit. Even as late as 1836, there were but two boats in the Ouachitta trade, and they were grumbling on account of the competition, and said the business was overdone. There was much manœuvring in order to secure the Sicily Island business, as it was by far the most profitable. The freights of those days were quite high. Cabin passage to New-Orleans was $30, and $35 coming back. Then, if the nights were dark, or the least squally, they lay by all night.† The "Ro-

* The first *brick house* in the parish was built on Sicily Island, near the head of Lake Looah, for Philip J. Hooter, by J. Crawford, in 1835-6.

Judge Taliaferro brought the first *piano-forte* into the parish in 1820. It was made by "George Astor, Cornhill, London; new patent." The wires are stretched on a wooden frame of simple construction. It is not more than twenty-six inches wide, having small legs, and is ornamented with inlaid work of white wood. It cost $300 in Kentucky.

† At this time there are, during the winter and spring, as many as thirteen boats in this trade, and the amount of business done on the Washitta is so very considerable, that, during the present fall, while the river has been so low as to prevent shipments, the merchants in New-Orleans have seriously felt the want of the produce. The same remark applies with greater moment concerning the trade of Red River. Freight on cotton bales,

meo," commanded by Capt. James Manning, first ran up Little River to Capt. G. Spencer's, in 1837. Dr. Keep ran the steamboat "Rock River" up into Catahoula Lake in 1840, and went above Lacroix ferry. This was for the purpose of getting a load of *pine knots* to carry down to the Mississippi River to sell to steamboats. In 1841, Capt. J. M. Philips took the "Hannibal" in the Catahoula Lake above Hane's ferry. Samuel Glenn, Sen., took the steamboat "Art" up to the lake for pine knots, and he may be considered really as the first who embarked in this business in earnest, although he was very unfortunate at it. After him, in 1847–8, Capt. Francis Routh took the steamboat "Ellen" into the lake after pine knots, and has continued at the business up to this time. During the last two years, several boats have been engaged in the business. At the time of the inundation of Concordia and Catahoula in 1850, many persons moved from the swamp to the pine hills of this parish, and engaged in gathering, hauling and piling *pine knots* on the margin of Little River and Catahoula Lake, at every available point. They built temporary houses and shanties, and for some months this portion of the parish presented quite an animated and bustling scene. The most serious drawback was provender for their teams. Many of them united their forces in partnerships.

Where the knots were plentiful, they would go with their carts and wagons and load them as they gathered the knots. But the usual practice was to set the men to chopping and splitting, while the women and children piled and corded the knots, and split wood, so as to be convenient to the wagoners. Many of the strongest women also used axes. The whole woods, in some places, presented the appearance of a large, ill-arranged woodyard, where hundreds of stacks and cords of wood and knots could be seen at once. A fair day's work for a hand, was to cut, split and pile three cords; but where the knots were plentiful, and little cutting required, much more could be done. The job of hauling was the most laborious and expensive. The wood was hauled to the yard and thrown down carelessly by the wagoner and his helper; after which, at odd times, other hands were employed in placing it in cord ranks. The boats gave for it then, from $1 to $1 50 per cord, which, in many cases, was paid in groceries and provisions, at pretty round prices, and sometimes "paid on a credit." The landing places also affected the prices. Many others, at the same time, were engaged in the getting out of round logs and square timber. But in all of it, very little money was realized by the laborers. It is the general belief that the shippers of the pine-knots reap all the profits, as they realize a large per centage from the boats on the Mississippi River.

Capt. Cooksey has been engaged for many years on the streams of this parish, navigating with a *horse-boat*, and selling merchandise. Besides him, there are others in the same business, all of whom appear to be making money.

LEVEES.—But little attention was directed to levees in this parish till a few years past. In 1847, some bayous, such as Crockett's on Little River, and other small outlets, were stopped. Others were closed in 1848–49, and 1850. Some action has been taken on the business by the Police Jury, but owing to the conflicting interests of the pine hill and swamp land citizens, it is difficult to adopt a general levee system. During the spring of 1850, the autumn of the same year, and also during this year, there have been several miles of leveeing done on Black and Little Rivers. Major Liddell deserves more credit probably than any other, as he has led the way and urged others to work, both by precept and example. During

during low water, this past fall, was $1 25; the general price is 75 cents, and sometimes as low as 50 cents, from Trinity. Cabin passage to New-Orleans, generally, $5, sometimes, $6, and the same back.

this year, the town council of Trinity have laid and collected a tax to be appropriated to the leveeing of the town, and already the laborers are on the spot at work.

The high water of 1828 was about four feet above the highest swamp lands of the parish, and about three feet over the lands of Catahoula prairie. The high waters have been thus noted by Judge Taliaferro. The unprecedented high water of 1779 was about four feet higher than 1828. The overflows of 1796, 1815, and 1823, were about the same, and six inches lower than '28. In 1813 it was nine inches lower. In 1809, and 1811, they were not so high, but still did some damage. The high waters of 1811, '13 and '15, caused many of the first settlers on Black and other rivers to leave the country. In 1824 and '26, they were about alike, and some two feet lower than '28. By observing the subsidence of the water for many years, it is found to fall oftener in June than any other month. For further observations on the overflows in the parish, the reader is referred to Dr. E. D. Fenner's Southern Medical Reports for the year 1850, vol 2d, p. 157, *et seq.* The following brief table may be interesting to some; the measurements were made by Major Liddell:—

The water in 1828 was	7	feet	2½	inches	higher	than in	1840.
"	"	12	"	1½	"	"	1841.
"	"	10	"	8½	"	"	1842.
"	"	5	"	6½	"	"	1844.
"	"	6	"	9	"	"	1849.
"	"	3	"	9	"	"	1850.

RELIGION.—The Methodists were the first to preach the faith of Protestants in this section of country. The earliest preacher is said by some to be Rev. Mr. Bowman, while others say that Rev. Randal Gibson and —— Blackman first passed through from Mississippi to Alexandria in 1805, for the purpose of preaching, and laying out a circuit, and selecting suitable places to preach at. Some of the settlers were members of the church, and willingly lent helping hands, and for many years the preachers held forth to their congregations in private houses. Among the names of the early preachers the following are given—Barnes, Griffin, Hennegar, Shaw, Shrock, Harper, John Cotton, Owens and Nalley. Mr. N. was a delicate, feeble man, and traveled on this circuit about 1815. In the winter, while attempting to swim the Hemphill's Creek, up near where Squire Heard now lives, he got very wet, and the cold benumbed him so that he perished on the road-side, where he was found by some of the neighbors. He was decently buried at old Mr. Brown's place, near by; and every preacher since that time who fills his circuit, pays a pilgrimage to the grave of the faithful minister who fell in his harness, and "died at his post."

The most of the church buildings in the parish have been put up by the joint contributions of the people, irrespective of denominational feeling, and are used by any and all ministers in good standing. There are three meeting-houses on Sicily Island, one in Harrisonburg, one in Trinity, two on Little River, and one on Black River, besides some in the pine hills—one being at the Sulphur Springs.

The Baptists have some 11 congregations in the parish, numbering 350 members in all, many of whom are blacks. John Impson was the first Baptist preacher in the parish, about the year 1825. It is said by some, that a Mr. Hill preached here as early as 1810, although he was not ordained till many years after. Rev. John Impson and Rev. Henry Humble constituted the first Baptist Church here, now known as the Catahoula Church, in 1826, there being then only *seven* members. At this time there are five Baptist ministers in the parish, amongst whom are the Rev.

T. A. Routon, and —— Lacy. The church property of this denomination is worth about $3,000.

There are no other sects of religion known as a community, although there are many isolated individuals of various persuasions. Generally the people are moral, the Sabbath is more respected than in many other places where more pretensions are made to morality and enlightenment, and the criminal docket is seldom occupied by any cases.

EDUCATION.—The whole number of public schools is thirty. Teachers, twenty-five; students, five hundred and forty-eight; funds raised for public schools by tax, $830; public funds, $3,644. The academy of Mr. J. B. Knapp on Sicily Island is deserving of particular mention. Mr. K. is a native of Ohio, and came to Louisiana some years ago, and was assistant in Mr. Digg's academy in Rapides parish. In 1849 he established his academy here, and had about fifty pupils. The house stands in a retired and most romantic spot, ten miles from Harrisonburg, in the lofty hills of the island, where there is plenty of spring water. The house was built by contribution and the joint labor of the citizens, and is commodious, protected by a veranda on the south side, having a shrubbery in the yard. The course of study embraces all the primary English branches, and at the same time the mathematics and languages usually taught preparatory to a college education. The cost of board and tuition for the year is from $120 to $130. The annual income is about $1,500. Mr. Knapp is principal; Mr. William Reh is teacher of instrumental music and French; and Mrs. Knapp is matron. During the present year there were twenty students in the male, and twenty in the female department. There is no school near here where better facilities are presented for obtaining a good, substantial education.

In 1810 the parish contained 2,000 square miles, and a population of 1,664. At this time there are 1,664 square miles, with a population of 3,569 whites, and 3,416 blacks.

White children under 10 years	1,325	Bales of cotton made in 1849	6,608
Natives of the state	1,860	Value of real estate "	$1,812,572
State tax of 1849	$6,000	" personal "	214,818
Parish "	3,000	Deaths in the year 1849–50	177

The different occupations and trades are thus represented:

Planters	475	Overseers	31	Printers	2	Hunter	1
Gunsmiths	2	Mechanics	30	Blacksmiths	7	Seamstress	1
Silversmith	1	Tailors	2	Teachers	15	Preachers	5
Painters	3	Raftsmen	4	Lumb. merch.	1	Doctors	16
Merchants	25	Laborers	3	Cooper	1	Baker	1
Lawyers	7	Wood-chop'rs	16	Peddlers	2	Brickmasons	2
Mill-wrights	4	Tanners	2	St. Boat Cap'n	1	Tav'nkeeper	1
Dis't Judge	1	*Gentleman*	1	*No occupation*	164		

There are 46 over the age of 21 who can neither read nor write—9 of whom are natives of this state. Idiots 7—2 of whom are dumb. There were 31 marriages from June, '49, to June, '50. From 1808, up to 1st December, 1851, there have been 1,102 *marriage licenses* issued.

When the parish was laid off and organized, Benjamin Tennelle was appointed Judge of Probate Court in 1808. Robert Hall succeeded him in 1809. Samuel Lightner succeeded him, and died in December, 1834. J. G. Taliaferro was appointed his successor in 1835, and was in office at the time of the change of the Constitution in 1846.

The first lawyers who practised at this bar were—John McNutt, John Hughes, J. G. Hunter, —— Harmon, —— Low, —— Patterson, —— Overton, —— Robertson, and Isaac Thomas.

PHYSICIANS.—Dr. David Phelps was the first physician, and amongst the earliest settlers, coming here in May, 1807, from Kentucky. He practised medicine forty-one years, and died in Harrisonburg 10th August, 1829, in the 63d year of his age.

Dr. —— Dodridge practised here as early as 1815. Dr. —— Ingersoll practised here about the same time, and was drowned in 1817, in attempting to swim across Turkey Creek, when it was very high and dangerous, owing to heavy rains. Dr. —— Trahern, 1818; Dr. Bojohn, a German, 1820; Dr. Mongin, 1820; Dr. Foster, 1818; Dr. James McBride Thompson, 1819. Dr. T. was a successful practitioner, coming from the State of Georgia. He died at Columbia, on the Ouachitta, in 1842–3. Dr. —— Sorden, 1823, from Delaware. Dr. Nuttall, from Kentucky, 1825. Dr. H. J. Peck, from Kentucky, 1828. Dr. Clarendon Peck, from Kentucky, 1835, died on the Island, August, 1837, much regretted. Dr. P. was an enthusiastic botanist, and devoted much of his time and labor to the investigation of the indigenous botany of this country.

BIOGRAPHY.—Having thus disposed of the various subjects presented for consideration, we will now draw this paper to a close, by giving brief outlines of the lives of some of the citizens of this parish, and would beg the indulgence of the reader for the very meagre sketches, as in most cases the information had to be obtained from others who were not familiar with the persons here mentioned.

General PHILIP CALDWELL came from Kentucky at an early day, and had been a member of the Legislature in that state. He was a member of our Legislature from 1809 to 1822, without any interruption. He enlisted, organized, and commanded a company, and hastened to the assistance of General Jackson at New-Orleans, in 1815, but arrived there after the victory. He was a man of strong mind, and entered upon the discharge of every duty with a great deal of energy and enthusiasm. The parish of Caldwell was named in honor of him.

JAMES BOWIE was mostly raised in this parish, although he was born in Burke county, Georgia. His father's name was Rezin Bowie, and was from Maryland; he settled on the Bushby, about ten miles south-west from Harrisonburg, in 1802. His wife was a pious and most excellent lady, and although Mr. B. was a man of strong mind and sound judgment, yet it is thought that the children inherited their versatility and remarkable intellectual energies from their mother. The family consisted of five sons; their names, in regular succession as to age, were John J., David, *James*, Rezin and Stephen; there was no daughter. They were all large, muscular men.

The opportunities for education here at that time were limited, so that they did not receive that culture which was calculated to develop and cherish their mental faculties to the extent they were capable of. All of them were passionately fond of the chase, and all the wild sports of a frontier forest life. In 1817-18, they removed to Opelousas.

At one time James Bowie, with ten hardy companions, was in Texas, and was there attacked by about 200 Indians, but the party managed to defend themselves against this fearful odds, and finally reached the white settlements in safety. On the 19th September, 1827, he was engaged in a duel with Norris Wright, and others, on a bar of the Mississippi River, near Natchez. This was one of the bloodiest duels perhaps ever fought, and in which B. was severely wounded and two men were killed. He, there, and on many similar occasions, evinced that coolness and courage so peculiar to him, and which ever characterized him, even in his last hour, at the storming

of the Alamo, where his eventful life was brought to an honorable and glorious termination.*

WILLIAM LAYLAND, a Revolutionary soldier, now living on Sicily Island, ten miles from Harrisonburg, was born in Berkeley county, Va., near Slinker's Gap, on the Shenandoah River, 3d May, 1742. His parents were from New-Jersey, of the upper Freehold; his mother's maiden name was Sarah Ellison. In 1773, there was so much agitation and excitement amongst the people and dread of the savages, that his parents returned from Virginia to New-Jersey, in the neighborhood whence they had migrated.

We will here narrate the occurrences of the life of Mr. Layland, pretty much in his own language, and we will see how well it accords with history, for some persons are incredulous on the subject, simply because from his great temperance and prudence, he does not show such extreme debility and decrepitude as is often evinced by persons many years his juniors.

In 1776, he enlisted as a volunteer in the continental service, and the first engagement in which he took a part was called *Morris' Battle.* The first officer under whom he enlisted was Morgan, the captain of a company of riflemen from Virginia. He was at the battle of Trenton, under the general-in-chief. He was with the army in the winter of 1777, when encamp-

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* Dr. James Holliday, who now practises his profession in Harrisonburg, is worthy of mention in this place. He was born in Virginia, in 1786, where he was reared and educated, completing his medical education in the University of Pennsylvania. He has been practising medicine for forty years, the last sixteen of them in Mississippi and this state. He settled here in 1839, and for the space of ten years has devoted a large share of his time to the study and investigation of the geology and mineralogy of the parish, as has been elsewhere mentioned. With the Doctor's permission, the following interesting and very touching anecdote of one of his ancestors is added, with a short explanatory note of his own.

"*A Singular Story.*—A correspondent of the Baltimore Sun writes the following to that paper: 'The recent decease of the Rev. John M. Duncan, in your city, revives an interesting incident in his early life. On her passage from Ireland, the vessel in which young John and his family were passengers, was cast away. For some time all on board were threatened with death by famine. At length lots were cast for a human victim, to appease the pangs of hunger. The lot fell upon the venerable grandmother of that noble boy—Mrs. Margaret Duncan. Unwilling to resort to such a horrid remedy, the ship's company resolved to postpone the dreadful death a few hours. The hopeless period again arrived, when lots were again cast for a sacrifice of life—again the lot fell upon the same lady. By common consent another respite was granted, and by perfect agreement a third time the same ordeal was to be passed. Strange to tell—the third time that aged lady was doomed to die. A brief space of time being allowed for preparation, the poor woman, perfectly resigned to her fate, made one vow unto the Lord, that if he would avert the pending blow, and in mercy save the ship's company, she would consecrate herself more fully to His service—would, on their arrival at any port, erect a temple in honor of His name, and educate and qualify, so far as in her power, her grandson, John M. Duncan, for the ministry of the gospel; that prayer was probably heard—for, as the lady appeared on the deck to render up her life, a voice from aloft announced the welcome tidings—'Sail ho!' A vessel hove in sight, came to their relief, and in safety they all reached Philadelphia. In that city, the venerable grandmother promptly performed her vows. She became a more devoted Christian; she erected the handsome church-edifice which there bears her name to this day—and her grandson, educated and qualified for the sacred office, spent a long life of piety and usefulness, and then surrendered his happy spirit, surrounded by numerous affectionate friends.'"

"The undersigned can vouch for the correctness of the above, with the exception that the Rev. John Mason Duncan did not cross the Atlantic with his grandmother, Mrs. Margaret Duncan, as he was born in the city of Philadelphia many years after her settlement there. The father of Rev. J. M. Duncan was Robert Duncan, Esq., formerly Mayor of Philadelphia. The late Rev. Dr. Mason, of the city of New-York, was Mrs. Duncan's son-in-law. The late Hon. Isaac McKim, formerly Member of Congress from Baltimore, was her grandson, and the undersigned her great-grandson. The church alluded to stands on Thirteenth-street, near Market-street.

"JAMES HOLLIDAY."

ed at Valley Forge, and says, that General Washington had all the soldiers inoculated. He was engaged in the battle of Monmouth, 29th June, 1778, and in a skirmish at Whitemarsh. He was with General Anthony Wayne at the storming of Stoney Point, on the 15th July, 1779. In this engagement, he states, that the general was directed to choose his men, as the service was considered hazardous. They attacked the place in the night, which was a very dark, cold, cloudy and drizzly one. They proceeded with so much caution and secrecy, that they were on the sentinels before they knew it, and the first one they seized and made him pilot them through the fort. They found the officers up in a three-story building, and when they were summoned to surrender, they demanded upon what authority, when the Americans quickly answered, "By the authority of Jesus Christ and the Continental Congress!" In this affair, Mr. L. was thrown from a ladder and fell amongst some stones and shells, which hurt him badly for awhile, but did not disable him from duty.

Late in 1781, word was brought into camp where he was, that the Eastern Division of the army was discharged, and they were disbanded without any clothes or pay, and allowed to make their way home as they best could. In passing through the country, the people often laughed at the shabby appearance of the soldiers, and jeered them, calling them "lousy rogues;" would not allow them to come into their houses, but made a great outcry, as if afraid they would be robbed. This conduct hurt him more than the hardships of Valley Forge, or any bodily injury sustained on the field of battle. But after all this, he was not dissatisfied with the soldier's life; so in 1792, he again enlisted under General Wayne, on the 13th May, to go against the Shawnee and other tribes of Indians; his captain was John Cummings, his lieutenant was named Hall, and the term of enlistment was three years. He joined the grand army of the West at Pittsburg, marched to Cincinnati, and thence to Greenville, where they remained inactive for some time, when his company, with others, numbering three hundred, were sent as an escort with ammunition, provisions, &c., in wagons, to Fort Defiance.

They were five days going, during which time the weather was rainy and unpleasant. When they arrived and delivered the stores to the officers in the fort, they struck camp on the margin of a small creek, and were carelessly engaged in cooking, some sleeping, and others amusing themselves in different ways, while their arms were stacked in the centre. Suddenly they were surrounded and violently attacked by a large body of Indians, who rushed to try and seize the guns, all the time yelling in the most terrific manner, and dealing death-blows all around. The struggle was terrible for a brief space of time, but the Americans overpowered them, and the surviving Indians made a precipitate retreat. There were many women in the fight, who were armed with short clubs, having an iron spike running through, with a hook on one end, while the other was sharp. The Indians carried off their dead comrades, and when they were so heavy that they could not handle them, they cut them up and threw them in bags and carried them off. In this fight, Mr. L. was knocked down into the creek, and lay there insensible for some time, and ever since that, his brain has been impaired, and his mental faculties somewhat enfeebled. When they marched back to Greenville, Dr. Carmichæl, the surgeon, attended him. After this, he was in another escort with stores and ammunition under Col. Hamtramk, from Greenville to Cincinnati; then he went from Cincinnati to Fort Hamilton, which place was under the command of Major Cass, under whom Mr. Layland afterwards served as orderly sergeant. He speaks in the highest terms of Major Cass, as an officer and a gentleman. While here, his three year term of

enlistment expired, when he again entered the service under Capt. Pike, at Fort Massac, in his company of riflemen. Shortly after this, Percy Pope came on with orders to pick his men at this fort, in order to proceed down the river to Natchez, and Mr. L. was taken in this expedition, and landed at Natchez 13th May, 1797. They came down in flat-boats, having a great many of them together, presenting quite a formidable appearance, although there really were not more than thirty efficient men on board, as a great many were sick. The boats were loaded with hogs, cattle, corn and provisions. After landing, they erected thirty tents on Liberty Hill, and from the display made, the Spanish officers were impressed with the belief that there was quite an army of them. At this time, there were only two or three decent looking buildings in the town, the Catholic Cathedral being the largest of any, but not very prepossessing. They hewed out and prepared a large and very high flag-staff, which they erected stealthily by night by means of long shears and blocks and tackle, and next day at dawn, when the Spaniards saw the American flag flying aloft, they were struck with fear and astonishment, as they concluded there must be a great many men where so much had been done. The Spanish officers prevaricated, and tried by many arts to baffle the Americans and prevent their getting possession of the country. They hired Mr. Job Routh and Mr. Cushing to haul their cannons and other things down the bluff at night, in order to embark down the river, but failed to get off, when the same gentlemen were hired to haul back their baggage before day again, hoping they had not been detected in their cowardly movements. This was done several nights before they finally departed. Before they left, they threw all kinds of filth into the wells, with the carcasses of animals, and choked them up with rubbish, and it was also thought they had thrown poison into them. The wells stunk so that it was impossible to go into them, or even approach near them.

At this time the army was reduced, and many officers lowered in their grade, or discharged from service, and only those men retained who had enlisted for five years. Major Isaac Guion was chief officer at one time. After Percy Pope left, Capt. John Heath took the command, who was maimed in his right hand, and used only the left. At this time Guion was made pay-master. When Mr. Layland enlisted, he was promised 300 acres of land for his services, but he has never received it yet. He was honorably discharged 13th May, 1798, by his officers, Guion and Heath, both of whom signed a certificate of his good and soldierly conduct.

During all his long service he never indulged in the use of any spirituous liquors, and always had the confidence and friendly regards of his comrades and officers, and was allowed more liberties than many others.

After leaving the U. S. service, he married Miss Elizabeth Swayze, the youngest daughter of Samuel Swayze, near Washington, Adams county, Miss., on the 9th January, 1799, and resided in that county till March, 1835, when he removed to Sicily Island where he now lives. His wife died here on the 9th March, 1837, leaving two daughters and five sons.

Mr. L. is now a good looking man for his age; his complexion is florid, face is full, blue eyes, and has a full suit of gray hair. He converses freely and cheerfully, while there is no appearance of that bodily or mental imbecility which might naturally be looked for in one of his great age. He walks a great deal, and prefers it to riding—he walks every Sabbath to a church near by his house, and last summer walked to Harrisonburg. One of his sons is living with him, and he has a small piece of land and a few slaves who support him comfortably. But for all his services in the army, he has never yet received any pecuniary reward from the government. He says he feels unbounded satisfaction in having acted a part in

achieving the liberty of his country, and hopes the present and future generations will not sacrifice it on the shrine of party strife or sectional ambition!

JOHN FAULK settled on the west bank of Black River, about the year 1810, just where Major Liddell now lives. He was soon after overflowed, and, retiring from the swamp, undertook the manufacture of salt on some one of the saline streams emptying into Red River. This was about the commencement of the war of 1812. Mr. F. had succeeded so well with the salt, that he took a boat load down the river, and on arriving at the mouth of Black River, was stopped by a set of lawless desperadoes, probably the Macon gang, who demanded and exacted toll of him before they permitted him to pass with his cargo.

He joined the army of Gen. Jackson in the winter of 1814, and on the night of the 28th December was wounded in the leg in the engagement, and in that condition was found by John Kitterlin, who took him up in his arms (F. being a small man) and removed him within the lines in safety. Mr. Faulk never knew his preserver until 1842, when Mr. Kitterlin stopped at his house on his way up to the land-office at Monroe, to secure his land. While there, upon talking over past events, and recurring to the battle of New-Orleans, the discovery was made of their former opportune meeting, when their delight was mutual, and both brave men clasped hands in life-long friendship. Mr. Faulk now lives, in old age, a wealthy planter on the banks of the Ouachitta, while Mr. Kitterlin has been gathered to his fathers. He resided in this parish many years on Little River, and when he died, left a widow and children.

TOWNS—*Harrisonburg.*—This is the seat of justice of the parish, and is situated on the west bank of the Ouachitta river, at the point where the pine hills are first seen in ascending this stream. The land is subject to inundation, and was under water in 1850. It contains a population of 200 orderly and sociable people.

The first white man who lived here was Jacob Simmons, about 1804–5, but the land was secured by pre-emption and right of occupancy to John Hamberlin, and confirmed to him by the United States land commissioners, in June, 1811. This land was afterwards bought by John Harrison, who came from South Carolina, and who employed Edward Dorsey to lay out and survey the town lots, and draw a map of the same, in the year 1813. The place was selected as the site for the court-house, which was built in 1808, and was only a small hewed-log hut; the next court-house was a frame building, put up in 1819.

Oliver J. Morgan had the first store here in 1809, and also kept the ferry across the river, but there was very little traveling. Robert Nobles built the first frame house in the place, which was burnt down a few years ago, while owned by Truman Phelps. Nobles kept tavern here in 1815. John Crane and William Taylor had a store here in 1813; J. Hamberlin and P. Caldwell, 1816; Richard King, 1816.

The present court-house is a commodious two-story brick building, fifty feet square. It was built in 1843, by D. E. Ross and Edward Bass, and cost nearly $7,000. The first jail was made of hewed logs. The present one was built before the court-house, and is constructed of the yellowish gray sandstone which is so bountifully supplied on the spot, looks well, and answers a very excellent purpose.

There are four stores and two groceries in the place, with an aggregate capital of $25,000. There are two very good hotels in the place. Two physicians—Drs. J. Holliday and W. H. Hanna, the former, also, has a large drug store.

TRINITY.—This village derives its name from its position at the triple confluence of the Tensas, Ouachitta, and Little rivers, and is situated between the two last-named streams. As early as 1804, this place attracted the attention of Dunbar and Hunter, as a highly eligible position, and they predicted that at some future day a large town would certainly spring up here.

A man named Eliphalet Plowden, who had been living on Black River at an early date, settled here in 1818, on the little mound on the bank of the Ouachitta,

not far above Capt. J. M. Philips' residence. He lived here many years, and kept a poor kind of entertainment for the few travelers who chanced to pass that way. A very singular though true anecdote is told by the old residents of this man. One of his neighbors named ——— Shammit, a Dutchman, had a wife who did not suit him, from some cause, and he expressed a strong desire to get rid of her. Plowden hearing Shammit speak in this manner, proposed a trade for the wife, and actually bought her from Shammit for one yoke of oxen and a rifle gun, and took her home here, and they lived peaceably together for many years.

Judge T. tells an anecdote of himself, which took place at Plowden's. He was returning from Natchez, where he had been to get some groceries and other supplies, amongst which was a quantity of salt in sacks, and was bringing all home in his skiff. Amongst other things, he had provided himself with a comfortable plaid cloak, which he wore, as it was very cold and rainy. They arrived at Plowden's about dark, and stopped for the night, and on going in, T. put his new cloak on the bannister-rail to drip, but unfortunately the skirt of it had been pretty well saturated with the salt water while sitting in the skiff, and as it was a time of overflow, Plowden had his cows on the mound around the house for safety. T. forgot his cloak till morning, when he began to look for it, and after much fruitless search, he cast his eyes under the house, and there found the *velvet collar* with the chain and clasp, and that was all that the hungry cows had left of his new plaid cloak—they had devoured it.

A man named John Brown lived here many years, and in 1831 he entered the land immediately in the point. James M. Daughters bought the land from Brown about 1836–7, and also entered more adjoining, higher up on the Ouachitta. He employed John Daniels to lay off the land into town lots in 1837, and make a map of the same. Daughters built the first house in the place that year, which was afterwards occupied as a store, by A. S. Barr, and is still standing opposite to the steam saw-mill. Felix Robb had a store on the bank of the Ouachitta, just at the present upper limits of the town, in 1836. In 1837, A. S. Barr and Anderson opened a store here. In 1837, F. Robb began to build what is now known as the Courtad house, on the corner; the lumber for this was partly obtained from mills in the pine woods, and partly sawed by hand, and cost $30 per thousand when delivered on the ground. He also had the two first brick chimneys put up here by Hughes Wilson, but the bricks were very mean, and the job was badly done; the bricks cost $17 50 per thousand.

Mr. Daughters died, and the lands here were bought by ——— Lester, at the public sale of his estate. After the death of Lester, his widow disposed of the property to Rev. W. H. Turnley. Many of the lots, however, had been disposed of previously. In 1848, the remaining lots, amounting to 81, were disposed of by lottery at $10 each, there being no blanks.

At this time the population of Trinity amounts to two hundred, and was greater in 1849, but owing to the cholera and high water of 1850, many persons left. Property has improved very much, and when the levee is completed, which is now being thrown up, no doubt the value will be still more enhanced.

There are four stores and four grocery establishments, two billiard tables and two ten-pin alleys, with an aggregate capital of $35,000. The first drug store was put up by Dr. J. J. Dearing, in 1850. There are two tailor shops, one tavern, and one smith shop. There are three ferries kept at this point which, owing to the immense amount of western emigration, are very profitable.

The first brick house was begun by A. S. Barr, in 1850, and completed in 1851 by M. Gillis, his surviving partner; the brick-work was done by Andrew Beck; the wood-work mostly by Benj. Vaughan; and the entire cost was $3,000.

There is only one church edifice in the place, which was erected by the joint contributions of the whole community. It is a neat frame building, 50x30 feet, with a belfry; was built by Messrs. Stout and Lehman, in 1848.

There are few places in the South possessed of more advantages than Trinity, for an outlay of capital in manufacturing establishments. The communication with New-Orleans is always open the whole year round; the Little River affords a short and easy intercourse with the pine hills for at least four months of the year, where any amount of pine and other timber can be easily and cheaply obtained; while the Ouachitta and Tensas bring down immense rafts of cypress and ash every winter and spring.

When the salt springs shall be properly worked; when the immense mines of iron ore shall pour out their valuable treasures; when the coal beds shall be upheaved, and the immense quarries of sandstone shall be brought into service, and the tar, pitch, and turpentine shall be thrown into market, then Trinity will assume her proper rank and station; then there will be immense cotton factories here; then there will be docks for the repairing and manufacture of steamboats, and her population will be counted by thousands, if not tens of thousands.

ART. VII.—CULTURE AND MANUFACTURE OF SUGAR.*

DESCRIBING AND COMPARING THE DIFFERENT SYSTEMS PURSUED IN THE EAST AND WEST INDIES, THE UNITED STATES, &C., AND THE RELATIVE EXPENSES AND ADVANTAGES ATTENDANT UPON EACH: BEING THE RESULT OF SIXTEEN YEARS' EXPERIENCE AS A SUGAR PLANTER IN THOSE COUNTRIES.

PART I.—HISTORY AND VARIETIES OF SUGAR-CANE.

[The great English work of Wray has been sold at a price that puts it out of the reach of our planters, though a most invaluable guide it would prove to them Scarcely a dozen copies have been taken in Louisiana. We have yielded to the solicitations of many friends, and will re-publish it in this and the next four or five numbers, in short parts, and very small type. It will be interesting in Caro lina, Georgia, Florida, Alabama and Texas, as well as in Louisiana.]—ED.

IT is a matter of considerable doubt whether the sugar-cane plant is a native of America or not. Strong opinions have been given as to the improbability of its being so; whilst, on the other hand, many old writers assert with great confidence the fact. And, indeed, viewing these conflicting accounts dispassionately, we must allow that, as the plant was found growing in its utmost luxuriance throughout the islands of the Pacific Ocean by our earliest navigators, it requires no great stretch of imagination to believe that it was also growing on the great continents of America long before it was brought there by the Portuguese and Spaniards. It would not be difficult to adduce many arguments in support of this belief: but I am well aware that such a discussion here would be deemed tedious and irrelevant.

The Chinese assert that sugar has been made from the cane, in China, for upwards of 3,000 years; and, without disputing with "*the flowery nation*" for a few hundred years, more or less, we will at once concede to them their undeniable claim to very great antiquity as sugar manufacturers. But I cannot divest myself of the belief that INDIA—not China—is in reality the country from which the sugar-cane FIRST emanated. Whether such be indeed the case or not, we have now no possible means of deciding; and, moreover, it is a question which no way interests the plain matter-of-fact planter; suffice it, therefore, to say, that it is now found growing in almost every tropical country under the sun.

VARIETIES KNOWN, AND THEIR QUALITIES.—From what I have already seen, I do not hesitate to say, that an endeavor to describe all the different varieties of cane that are known, would be a wearisome, if not a hopeless, task; from which, it is clear to my mind, that no adequate benefit can be derived. Therefore, I will confine myself to a mention of those which have been more prominently brought before me; and amongst them, I

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* By Leonard Wray, Esq.

think, almost every variety known to the generality of my readers will be found noticed.

In Jamaica, the varieties common are—the Bourbon, the Otaheite, and Batavian canes.

In Bengal, the yellow and purple ribbon-canes of Otaheite; the Bourbon, or Mauritius; the Singapore (Tibboo Leeut*); the large purple cane of Java; the red cane of Assam; the common, small, hard cane of China; and some ten different kinds of native cane, varying in thickness from one inch and a half, to half an inch in diameter; the very smallest resembling little riding-switches.

In the Straits Settlements of Penang and Province Wellesley, Malacca, and Singapore, the varieties are—the Salangore cane, or, as the Malays term it, Tibboo Cappor; the Tibboo Leeut; the Tibboo Teeloor, or egg cane; the Tibboo Etam, or black cane; the Tibboo Meerah, or red cane; the Tibboo Batavee, or Batavia cane; the Tibboo China, or small China cane; and many others not requiring description.

To give a distinct account of the foregoing canes, I will take them as I have named them, each in succession.

The Bourbon cane.—There does not appear to me to exist any very satisfactory account of the origin of this variety; the opinion generally received is, that it was introduced into the West Indies from the island of *Bourbon*, but came originally from the coast of Malabar, where it was found growing spontaneously. When first discovered, it is stated to have been a small sized, but soft and juicy cane, which was so much affected by the change of climate, soil, and the cultivation it received in Bourbon, that it increased wonderfully in size and richness of juice; so that it was cultivated in preference to the old species, which at length it entirely superseded throughout the island.

From my own experience in Jamaica, I can pronounce it a most valuable cane; but I entertain a strong suspicion that it is in reality no other than the Tibboo Leeut of Singapore, (sometimes called the Otaheite cane,) somewhat altered by change of soil and climate. I have bestowed considerable attention upon it, and have carefully marked the Tibboo Leeut, growing on entirely different soils, in different situations, and under widely different circumstances, and I can come to no other conclusion than that they are identical.

The Otaheite canes are two—the yellow and straw-colored, and the purple-striped or ribbon cane.

The former and the Bourbon are so much alike in all respects, and have become so intermixed on West India estates, that it is a matter of great difficulty to distinguish between them; indeed, I have long been of opinion that they are the same variety of cane. If we remember that the Bourbon was taken to that island, then to Martinique, and afterwards spread in course of time throughout the West India islands; that the Otaheite was taken direct from that island to the West Indies, and direct to Calcutta and the Straits Settlements; that the Tibboo Leeut came from Manilla (evidently from Otaheite originally) to the Straits of Malacca; if we consider these facts, we shall find no cause for astonishment at the very slight difference that exists between them; on the contrary, we must be much struck at the extreme similitude, which even such extraordinary changes have failed to destroy. But let the *three* be collected, and then planted out, under precisely similar circumstances, and I am quite satisfied no man can distinguish the one from the other: at all events, I have no hesitation

* Tibboo, or Tubboo, is the Malay name for sugar-cane.

in owning that I never could—the which has served to convince me that they all came originally from Otaheite.

As I consider them to be the same variety, and as one description serves for the whole, I will therefore treat of them accordingly. With the advantages of a good soil and favorable season, plants of the first year's growth often attain the height of twelve or fourteen feet, measuring six inches in circumference, and with joints eight or nine inches apart. I do not mean to imply that the average size of a field, or of fields, is so large, but that canes may be picked out from amongst them fully as large as that. Such plant canes commonly yield (in Jamaica, Bengal, and the Straits) two and a half tons, and not unfrequently three tons, of marketable sugar per acre. Such an amount of produce per acre is a very common and well known occurrence; but the general calculation among planters is, however, *two tons of dry sugar from each acre* of "plant canes:" that is, canes of the first year's growth. I can see no difference in the yield of this cane in either Indies; for, in good land, the return is generally as above stated.

Planted at proper seasons, as will be treated of hereafter, they often attain maturity in ten months, and very rarely exceed twelve. Under certain circumstances, it may be expedient to allow them even fourteen months—as in excessively rich land, or a wet season; but, of course, these circumstances come more particularly under another head, which will be fully discussed in its proper place.

These canes require a generous soil, careful fencing, and attentive management. Many soils which suit other varieties, are unfit for the proper development of these; whilst it is generally remarked, that they are more sensible of the injuries committed by the trespassing of cattle, sheep, &c., during their early growth, than other descriptions. The foliage of the Otaheite is of a pale green, leaves broad and drooping much; and the plant, on arriving at maturity, frequently arrows, or flowers; which renders it, when in extensive fields, exceedingly graceful and ornamental in appearance.

"The purple striped Otaheite" cane is very much like the ribbon cane of Batavia in appearance: but the former has broad purple stripes, on a greenish yellow ground, whereas the latter is of a blood-red, on a transparent straw-colored ground. It is often called "the Otaheite ribbon cane," in contradistinction to "the ribbon cane of Batavia." Its foliage is of a much darker color than that of the yellow variety, whilst its leaves droop much less. It is a hardy and estimable description of cane, of large size, soft, juicy, and sweet; and yields sugar in equal quantities, though of a rather dark quality.

The Batavian canes, with which I am acquainted, are of four descriptions, viz: the yellow violet; the purple violet, or Java cane; the "transparent," or ribbon cane; and the Tibboo Batavee, or Batavian cane, of the Straits.

"The yellow violet," so denominated in the West Indies, differs from the Bourbon in being smaller, less juicy, considerably harder, of slower growth, and of a foliage much darker and more erect. When ripe, it is usually of a straw-color, its skin or rind is thick, and the pith hard; but its juice is rich and abundant. The yellow violet does not require so rich a soil as the Otaheite, but contents itself with that of an inferior description: this renders it of much importance in planting out large tracts of land, some portions of which may be too poor for its superiors. In Jamaica it is usual, in such places, to plant the violet; thus we often see large patches of it flourishing in the midst of a field of the Bourbon. To an unpracticed observer, this sight would cause much speculation; as its dark green foliage presents a striking contrast to the pale green of its immediate neighbors, and might lead to the conclusion that those dark green patches were occasioned by some greater degree of fertility and moisture existing in those

parts; whereas the contrary is, in fact, the case. The sugar manufactured from this cane is of a very fine quality; but considerably less in quantity than the Bourbon. A very common custom of the Jamaica planter is, to mix the yellow violet with Bourbon plant canes, according to proportion, for the purpose of rectifying the juice of the latter, so that burning and other such vexatious occurrences might not arise in boiling.

"The purple violet," or large black cane of Java, is fully as thick as the Otaheite, with joints varying from three to seven inches apart. In height, it is usually about eight or ten feet, with leaves of a lighter green than the "yellow violet." The very upper joints sometimes exhibit faint streaks, becoming imperceptible in the lower joints, which are of the darkest purple color. Very frequently a white resinous film is seen incrusted on the joints of this cane, which, over the rich purple, presents much the same appearance as that peculiar to the finest bloom raisins. Sometimes this resinous crust lies so thick, that the purple of the cane itself is in some joints scarcely perceptible. When in perfection, it yields a very sweet and rich juice. Being very hard, it is difficult to grind, and affords a comparatively small quantity of juice, which is sometimes rather troublesome, from the resinous (or gummy) and coloring matter which it contains It is a very hardy cane, thriving well in poor, dry soils; and in Jamaica it is often planted in the outer rows of the cane fields, to stand the brunt of trespassing cattle, which, browsing along the roads, or breaking through fences, tear and trample down the canes. To other descriptions of cane, these ravages would be very serious indeed; but, fortunately, the purple violet is so hardy, that it quickly recovers from such injuries, and springs up again with astonishing rapidity. It was introduced into the West Indies about the same time as the Bourbon, and is still much cultivated. In the Straits, the Malays term it Tibboo Etam, (*Etam*, black; *Tibboo*, cane,) or black cane, and cultivate it much around their houses, for eating.

"The transparent," or ribbon cane, is much smaller in size than the Otaheite ribbon cane; is of a bright transparent yellow, with a number of blood-red streaks or stripes running the whole length of the stalk, and varying in breadth from a quarter to a full inch; and being very clear withal in its tints, it presents a very pretty appearance. Its leaves are of a green, similar to that of the yellow violet, but more erect. It grows from six to ten feet high, with joints from four to eight inches apart, and four inches in circumference.

"The transparent" is generally planted in light, sandy soils, where n other cane will thrive; sometimes it is planted promiscuously with the yellow violet. Although its rind is thick, and general texture hard, yet it yields a good quantity of juice of excellent quality, which is easily converted into fine fair sugar. Planters often grind this cane, also, with Bourbon plants, for the same reason as applies to the yellow violet.

"The Tibboo Batavee," or Batavian cane, is a cane common in the Straits of Malacca, where it is cultivated by the Malays. In appearance it is much like the yellow violet, except in the peculiarity of its color, which is rather greenish, with a pink shade, in parts; in some of the lower joints this pink color is very bright and pretty, whilst in the *upper*, it is more faint and delicate; the joints are seldom more than from three to six inches apart. In height, size, and foliage, it closely resembles the yellow violet; although it differs from it, in being much softer, more juicy, and less hardy in habit. In a rich soil it is prolific, and rattoons well,—its juice is rich, clarifies easily, and gives a fine sugar: but on the whole, it is inferior to the Otaheite variety, yet requires an equally rich soil.

A description of cane was sent from the Mauritius to Province Wellesley, Penang, under the general name of "the Mauritius cane," and I had

several opportunities of seeing it growing, when but young. It is very different from other descriptions of cane I have seen from the Mauritius, and it struck me as being an East Indian cane improved by cultivation.

I have seen only three varieties of large canes on the Continent of India, which are supposed to be peculiar to the country: one is the large red cane of Assam, specimens of which were kindly sent me by Dr. Keith Scott, the Hon. East India Company's civil surgeon, at Gowhatty in Assam. This gentleman had established a sugar estate at Gowhatty, and made sugar; so that he had experience of the right sort, which lends to his opinion considerable weight. In writing of these canes, he says:—"This morning I dispatched, by the Assam Company's tea boat, a couple of red sugar canes for you, requesting the Honorary Secretary of the Company to forward them to you. They are of a description you may not have met with before, very juicy and sweet; the sugar produced from them is of an exceedingly fine grain and good color: they are, moreover, strong in growth, and much less apt to fall over than the Otaheite, to which they are fully equal in size, as well as in quantity and quality of juice. I am also preparing for you some '*flowers*' of this cane, in different stages, which I will dispatch, when quite dried. I have now (January) canes in flower, which were planted last May!!"

So that the canes in flower were only eight months old; consequently they could be cut and manufactured in ten months from the day of being planted. I am sorry to say that two months elapsed before I received these fine canes, by which time they were dead and withered up.

Some time afterwards, Dr. Scott again sent me two boxes, with some pieces of the same cane, *growing;* but unfortunately they did not survive the long and roundabout way by which, through unforeseen occurrences, they were sent.

I subsequently had a long and interesting conversation with my kind and excellent friend, when he repeated all he had before written, and added much more, in praise of this red cane,—from all which I have been led to form a very high opinion of it.

In Lower Bengal, (near Calcutta,) and in the Straits of Malacca, a large red cane abounds, which bears so exact a resemblance to Dr. Scott's Assam cane, that I conceive it to be the same identical variety, somewhat improved in the rich and fertile soil of Assam. It must be remembered that I do not speak positively, as I never had an opportunity of seeing the foliage of the Assam cane.

The red cane of Bengal is a large and fine cane, much used about Calcutta for sugar manufacture; and I have had brought to me by natives, sugar made from it by themselves, (in their own rough and primitive way,) which exhibited a grain of immense size, strength and brilliancy. They, however, say that it is not a good cane for sugar-making, as the juice is very dirty, and the sugar always dark colored. These assertions, however, have no weight with me; for I can easily detect the cause, and know that it can be avoided.

In the first place, the Bengalee cultivator has a plan of tying up the canes of each root closely together, with bands made with twisted cane leaves; so that, as they grow, the resinous substance exuding from the rind, accumulates along the whole length of each cane, turns black, and, together with the excrement of numerous insects, (which harbor and breed in these snug retreats,) make the cane-stalk quite filthy: add to this, the exclusion of air and light, which are necessary to the perfect elaboration of the juices, and I think we need not be surprised at the juice being dirty and difficult to clarify. In the Straits of Malacca I have seen them as clean as other canes, tall, erect and vigorous: but the Chinese say that

in grinding, they give out a considerable quantity of coloring matter,—which, by the way, would be of little consequence, did they clarify their cane juice properly, which they do not.

I still, therefore, incline to the opinion, that they are a fine, and under certain circumstances, valuable description of cane. The Malay name is "*Tibboo merah*"—red cane.

The next large canes are the black and the yellow Nepaul canes, which I obtained from the kingdom of Nepaul—four plants of each, growing in boxes. They arrived safely, after a series of adventures, in a fine, healthy condition, giving promise of becoming fine canes: but a long and dangerous illness obliged me to go away for change of air, during which time they were destroyed by goats. They were, however, large sized and fine looking canes, fully equal in appearance to the Assam cane—and my messengers, together with the Nepaulese (in my employ) gave them the very highest character. I regret to say that I never had another opportunity of seeing these varieties again.

As to the small sized canes cultivated in India, they are so numerous that I cannot attempt a description of them: moreover, they are, in comparison with those which have been, and are to be, noticed, so very wretched, that did I not know them to be cultivated, by the prejudiced native, to an immense extent, I should deem them unworthy of being mentioned in any way; as it is, I shall have to treat at large of them when I come to explain the cultivation of the cane in India.

"The *China cane*" was received into the Botanic Garden of Calcutta in 1796, direct from China; having been specially ordered by the Bengal government, at the suggestion of Dr. Roxburgh, who considered it a new species, and named it *Saccharum Sinense*, or Chinese sugar-cane. Writing in 1799, Dr. Roxburgh says, "It has been cultivated with the utmost possible success; many HUNDRED THOUSANDS have been distributed over the country amongst the cultivators of that article." Dr. Royle* writes, "it possessed the advantage of being so hard and solid as to resist the forceps of the white ants and the teeth of the jackal—two great enemies to the East India sugar plantations. It was found, however, too difficult to express the juice with the Bengal sugar mill; but Dr. Roxburgh was of opinion that this might be obviated by introducing the simple, yet powerful, mill of the coast of Coromandel. He further describes the cane as bearing drought much better than the sorts in general cultivation; producing, moreover, a profitable crop, even to the third year; while the common cane of India must be annually renewed. According to the report of Mr. Touchet, the commercial resident at Radnagore, and of Mr. R. Carden, superintendent of the Hon. Company's Sugar Plantation Farm at Mirzapore Culna, "it not only resists the ravages of the white ant and jackal, but yields about double the produce of the common Bengal cane."

Independently of this testimony, which I know to be most correct, I can state my own experience of them; and I cannot better do so than by giving the account, as I wrote it at the time, (about four years and a half ago.) The Chinese cane was supplied me from the Society's Garden, Calcutta, and took upwards of two months coming up by boat; yet it was perfectly fresh and green on its arrival, whilst the other descriptions of cane had all died, or withered away. From the three hundred canes sent me, by cutting them up into pieces of two joints each, I obtained sufficient to plant out a small patch of ground—which this season yielded me so many canes, that by cutting them up as before, I was enabled to plant out about SIX BEGAHS (four acres) of land with them, besides supplying my neighbors with a few. In its nature it is extremely hardy and prolific; for during

* See Royle, on the Productive Resources of India, p. 92.

the last hot season, it remained uninjured in every respect, whilst the others were all either burnt up, or eaten out of the ground by the white ants. As the rains came on, the China canes sprang up wonderfully, many roots having no less than THIRTY shoots; which, by September, had become fine canes, about twelve feet in height, three inches in circumference, and with joints from six to eight inches apart. These were cut in October, and planted out; yet although we had a tolerably severe winter, the cold appeared to have little or no effect in checking their growth; whereas NATIVE CANES, planted at the same time, were ENTIRELY *kept back*. For their extreme hardiness in withstanding heat and cold, white ants, jackals, &c. &c., I myself can vouch; and, moreover, I consider that it is a variety of cane which deserves the attention of the East India sugar planter. Such was my opinion nearly five years ago, and I have had every reason, since that time, to be satisfied of its correctness.

A gentleman in Bengal, largely connected with sugar matters, writing to me on this subject, says, "You may remember that I wrote to you some months ago, soliciting information and advice regarding the "*China cane*," which you gave so good an account of in the *Agr. Hor. Society's Journal*; I have much pleasure in now giving you the result of my experiment.

"As you advised, I wrote to the Society for five hundred canes, which arrived quite fresh. I then cut them up, allowing only ONE JOINT to each piece, and planting them in lines, four feet asunder each way, delivered them up to the same chances as my Otaheite and native canes were exposed to. The result has been beyond my utmost hopes; and this, too, after a season of unusual severity, which has grievously affected my native cane; and as to my OTAHEITE, what with the hot winds, the white ants, the long continued wet weather, and the detestable jackals, I have saved but a very few; whilst nothing seemed to injure or affect the *China cane*. Did you ever know the Otaheite cane-sprouts to be devoured by caterpillars? I forgot to put those depredators in the list of enemies to the Otaheite plant; although they certainly are very formidable ones, as the partial destruction of many of my plants testified. They attacked the plant when only a few inches above the ground, from which many never recovered.

"I understand that INDIGO PLANTS are often quite destroyed in the same way, so perhaps it may not happen again for some years. This hope determines me in trying the Otaheite cane once more; when, if it does not succeed, I shall keep entirely to the China cane: which, by the by, I am now extending, as far as my plants will allow me. I am disgusted with the native cane, and shall soon put them aside altogether."

I think these accounts of the China cane are sufficient to establish the fact of its being a variety well suited to India; although I need not say that it is immeasurably inferior to the Otaheite, wherever that cane can be cultivated successfully. It was introduced into India in 1796, and in 1799 was spreading rapidly all over the country. It is now very common throughout Bengal, although the natives think it a native cane, from its having been so long amongst them. They have given it a native name, which I quite forget. I met it in several places, and recognized it at once; yet I never met but one native who knew it to be otherwise than a native cane. Certainly, its neglected cultivation during fifty odd years in India, has caused it to degenerate very much; hence my advice to all persons desirous of trying it, "Send to the Society's Garden, in Calcutta, for it."

It is a very small sized cane, being rarely more than one inch, or one and a quarter inch in diameter; but it is sweet, and makes fine, fair sugar. The Chinese assert that it is better adapted for sugar-candy making than any other cane.

In the Straits Settlements of Penang and Province Wellesley, Singapore and Malacca, the principal canes are eight in number. Of these, first and foremost, is "the SALANGORE CANE," by the Malays of Province Wellesley termed "tibboo bittong beraboo," (the powdery bark cane,) but by the Malays of Singapore and Malacca, it is named "tibboo cappor," (the chalk cane,) from its having sometimes a considerable quantity of a white resinous substance on the stalk. *This is the* FINEST *description of cane in the Straits Settlements, and* PERHAPS IN THE WHOLE WORLD. In Province Wellesley it is universally cultivated on all the estates, and is only known to those planters as the China cane; from the simple circumstance of the Chinese cultivators in the province having been in the habit of cultivating it for years, before any European embarked in such speculations in those parts.

I have cut as many as five of the larger canes from one stool; each cane from ten to fifteen feet long, without leaves, and seven and a half inches in circumference, (round the *lower* joints): each cane weighed from 17 to 25 pounds. That of 25 pounds weight, I kept some weeks in my house, and numbers of people saw it; it was thirteen and a half feet long, and two and a half inches in diameter, yet it was not by any means so large a cane as I have seen. The place where I found it growing, was a newly cleared piece of jungle land, whereon a Malay had "*squatted*," built a house, planted rice, and some three acres of sugar-cane around it.

The cane plants had been stuck in the ground without regard to regularity, and had received no kind of attention, yet I counted twenty-five canes of immense size growing from many of the stools. This may be considered a solitary instance, but it is by no means the case, as in any fair jungle land this cane attains an extraordinary size and height; and I dare to affirm, that on any estate in Province Wellesley canes can be found, in the cane pieces, which will weigh 15 pounds at least. It is very evident that the average size on an estate of five hundred acres is much under that—and indeed too large a cane is both inconvenient and undesirable for sugar manufacture.

The Salangore cane is remarkable for the quantity of "*cane itch*," (so termed in the West Indies,) which is found on that portion of the leaf attached to the cane-stalk. Sometimes touching a growing cane incautiously, I have had my hand covered with it, and thousands penetrating deep into the flesh, cause great irritation and inflammation. The leaves are very broad, and deeply serrated at the edges, with a considerable droop; they are some shades darker in color than the Otaheite, and have so good a hold on the stalk as very seldom to fall off, when dry, as some canes do, but require to be taken off by hand. They rattoon better than any canes in the Straits; and I have known them to yield forty piculs (a picul is 133⅓ lbs.) of granulated, but undrained sugar, per orlong, (an orlong is one acre and a third,) as third rattoons. From what I have seen, I am disposed to think that in the West Indies, Mauritius and India, they would be found to rattoon better than any other cane.

As "*plant canes*," I have known them to yield, on an average of some acres, sixty-five piculs of granulated sugar per orlong—or 6,500 lbs. per acre. And I have frequently been informed by a French gentleman in Province Wellesley, that he has in some cases obtained as much as 7,200 lbs. of sugar per acre (undrained); from which he has secured 5,800 lbs. of shipping sugar, well dried in the sun.

For my own part, I have always reckoned as an average, 3,600 lbs. of dry sugar to the acre, as the return this cane will give, on anything like good land, in the Straits, according to the present imperfect mode of expression and manufacture: but considering the surpassing richness of land

in the West India islands, Demerara, and Mauritius, I should not be in any way surprised to find that it would there give even three tons an acre.

The Salangore cane grows firm and strong; stands upright much better than the Otaheite; gives juice most abundantly, which is sweet and easy of clarification, boils well, and produces a very fine, fair sugar, of a bold and sparkling grain. On the whole, I like this cane better than any other, and would like to have it tried in the West Indies and Mauritius.

It appears to me to be peculiar to the Malayan Peninsula, and is said to have abounded more particularly in the Rajah of Salangore's territory (between Penang and Malacca.) At present, being cultivated on some fifteen or twenty large estates in Province Wellesley, Penang, it is of course obtainable in that settlement in large quantities.

The "*Tibboo leeut*," (clay cane,) sometimes called the Otaheite, I have already described as belonging to that variety.

The "*Tibboo teeloor*," (or egg cane,) has long been deemed to be the Otaheite cane by the planters of Province Wellesley, but quite erroneously. It is evidently the cane described by Cook, and other navigators, as peculiar to the island of Tanne, one of the New Hebrides. (Quoting from memory,) he says—"The sugar-canes of this island, we remarked, were much superior to those of Otaheite, being softer, more juicy, cleaner, of a paler, brighter yellow, and altogether much finer and more luxuriant; but this superiority in the sugar-cane is more than counterbalanced by the great inferiority of the bread-fruit, &c., produced in this island, compared to that of Otaheite."

I have seen many accounts of the same tendency, but I had an opportunity of satisfying myself more completely by meeting in Singapore the master of a ship who had several times visited those islands, and was altogether a very sensible and observant man. He said that himself and his officers had taken particular notice of the extremely clean and bright appearance of the *Tannæ* cane, in comparison with that of Otaheite; and that on his arrival at Singapore, his Dabash, (a native who supplies the shipping while in harbor,) had come off to the ship with a basket of fruit, amongst which were some pieces of sugar-cane, which they all immediately recognized as the cane of Tannæ, but which the Dabash told them was called in Singapore the egg cane. He further identified the "tibboo leeut" as the genuine Otaheite cane, and said that every man on board his ship could go into any Chinaman's garden and point out to me, without hesitation, the two different canes! I also discovered that this variety was introduced into Manilla many years ago, and from thence found its way to Singapore, where it is extensively cultivated by the Chinese for sale in the markets, as it is in great request for eating. In size it is fully equal to the Otaheite, whilst it is so exceedingly clean and beautiful, that it surpasses all other canes in appearance.

It has many very singular peculiarities, which no one can overlook or forget. Apart from its extreme cleanness and pretty appearance, it is remarkable for the almost entire absence of *cane-itch*—smoothness of leaf; the curious manner in which it bulges out between the joints (which has obtained for it the name of the egg cane, from the Malays, who say that it bulges out in the form of an egg); the peculiarity of shedding its leaves as they become dry; its delicate structure, which causes it to fall over, and very frequently to break short off; and the large size of the eyes or buds (along the stalk,) which are unusually developed, and more readily burst forth than in any other cane I know.

It is very prolific, and with the exception of the China cane, I know no other that can be so quickly propagated; as every eye shoots forth most

vi orously, and each stool has generally from five to fifteen canes growing from it.

It produces as much (if not more) juice, of rich quality, as any cane growing—which can be converted into fine, fair sugar, of a good, strong, sparkling grain. But with so many points to recommend it, still there are, undeniably, some very serious, and I fear fatal objections to it, as a cane for the sugar planter. Its tender nature, liability to fall over, break, and thereby be entirely destroyed, could only be obviated by its being planted, perhaps, on lands securely sheltered from wind, and which also are neither too damp nor too rich.

I have often seen such places: for instance, what we term in Jamaica, *bottoms*, or land lying between hills, which bottoms are generally sufficiently rich for this description of cane, without being too much so. But many places could, no doubt, be found admirably suited, where it would be well protected, and yet have abundance of sun, which it much requires; otherwise, its juice is liable to become watery and mucilaginous: whereas, on the contrary, if it has a fair soil and abundance of sunshine, no juice can be cleaner, and none more rich in saccharine matter.

Some experiments are now going on with this cane on two estates, one of which has fifty acres growing, which will soon be ready for the mill. As far as they have yet been tried, they have, notwithstanding their falling and breaking, yielded very fair returns; but the Chinese contracting cultivators do not like them.

I have already described the Batavia, China, red, and one black cane, found in the Straits, and have, consequently, only one more to notice. This, too, is called "Tibboo etam," but also has an affix, distinctive of its particular character. Thus the Malays term it, "Tibboo etam, obat," or, "Black medicine cane," from an idea that in certain diseases it is a very sovereign panacea. What these highly esteemed properties are, I have altogether forgotten; but these plants are frequently found growing in the gardens of Malays, that they may be found in case of need. It is a small, but clean and pretty cane, of a rich purple color; which color it imparts to the hands and lips of those who eat of it; I was surprised to see how it stained our hands and faces, having never seen such a thing before. One other great peculiarity is the beautiful tint of the leaves, which in some (very young) is of a delicate pink, gradually darkening (in those older) to a fine purple, mingling harmoniously with the green ground of the leaves, and altogether forming a most uncommon and highly pleasing foliage.

From what has been said, it must be evident that the Otaheite and Salangore varieties are the two most valuable canes we know of. It will also be seen that there are, nevertheless, others which, in certain localities, and under peculiar circumstances, become of very great importance, and highly deserving of attention. All this will be rendered more striking as I proceed: I shall therefore only add, that the judicious selection of a variety of cane for planting is of immense importance, as it is not more expensive or troublesome to cultivate a superior cane, which will give large and remunerating returns, than it is to cultivate an inferior kind, which will lead only to disappointment and loss. Nor do I think that any estate should have only one description of cane. It is advisable always to have two, or even three; one of which might be cultivated generally.

DEPARTMENT OF AGRICULTURE.

1.—NOTICES RELATIVE TO TOBACCO

BY DOCTOR A. T. THOMSON.

"He first the snuff-box open'd, then the case."—*Rape of the Lock.*

WHAT is tobacco, which has enslaved to its use the greater part of the human race for upwards of three centuries? is a question which naturally occurs to the mind of any one who hears or reads of the obstacles which were opposed to its introduction into Europe, and the popularity which it has for so long a period of time maintained. The reply is familiar to every one; it is the dried leaf of a species of plant which is named, in botanical language, *Nicotiana tabacum;* but it is not generally known that the tobacco, which is brought to this country in the form of dried leaves, segars, and snuff, is the production of not one only, but of several species of the genus Nicotiana. The greater number of the species are annual plants, natives of South America; but two, at least, are perennial; the Nicotiana *fruticosa*, which is a shrub, a native of the Cape of Good Hope and of China; and N. *urens*, a native of South America. Many of the species are cultivated in Europe; but it is remarkable that Humboldt found only two of them, the N. *paniculata*, and N. *glutinosa*, growing wild in the Orinoko. He added two new species to the family, the N. *laxenis* and *andicola*, which he found on the Andes at 1850 toises of elevation.

The species of Nicotiana which was first known, and which still furnishes the greatest supply of tobacco, is the N. *tabacum*, an annual plant, a native of South America, but naturalized to our climate. It is a tall, not inelegant plant, rising to the height of six feet, with a strong, round, villous, slightly viscid stem, furnished with alternate leaves, which are sessile, or clasp the stem; and are decurrent, lanceolate, entire; of a full green on the upper surface, and pale on the under. In a vigorous plant, the lower leaves are about twenty inches in length, and from three to five in breadth, decreasing as they ascend. The inflorescence, or flowering part of the stem, is terminal, loosely branching in that form which botanists term a panicle, with long, linear floral leaves or bractes at the origin of each division. The flowers, which blow in July and August, are of a pale pink or rose color; the *calyx* or flower-cup, is bell-shaped, obscurely pentangular, villous, slightly viscid, and presenting at the margin five acute, erect segments. The *corolla* is twice the length of the calyx, viscid, tubular below, swelling above into an oblong cup, and expanding at the lip into fine, somewhat plaited, pointed segments; the seed-vessel is an oblong or ovate capsule, containing numerous reniform seeds, which are ripe in September and October; and, if not collected, are shed by the capsule opening at the apex.

The character that particularly distinguishes N. *tabacum* from the other species of the genus, is the sessile, recurrent leaves.

Besides the species of Nicotiana described by botanists, seven kinds of tobacco, some of which are probably distinct species, others only varieties of the *tabacum*, are cultivated in Virginia; and known by the names of Hudson, Frederick, thick-joint, shoe-string, thickset, sweet-scented, and Orinoko. The cultivation of tobacco varies in different places. I shall only mention that which is pursued, and the manner of preparing the plant, in the United States. The seed is sown in February and March, when the ground is soft and rendered light by repeated workings; in April, after the first vernal rains, the young plants are drawn, and planted in beds, at the distance of three feet from one another. The plantations must be kept well weeded; and in another month the top of each plant is pruned off, the lateral shoots or suckers are taken away, and the weeds very carefully kept down. At this period the plants are attacked by several insects, from which they are cleared by turkies, flocks of which are driven into the grounds for this purpose. When the plant has attained its full height, the leaves begin to acquire a brownish color, and a clamminess which indicates their maturity. They are now cut close to the surface of the ground, and laid in heaps, exposed to the sun, for one day; then carried to the sheds, where each plant is hung up separately,

and remains until the leaves are perfectly dry; after which they are stripped from the stalks, and tied in small bundles, a twisted leaf serving to tie them together. These bundles are now laid in heaps, and sometimes covered with blankets or straw, to favor a fermentation which takes place in them; but to prevent their being overheated, they are occasionally opened and spread abroad to the air. As soon as all danger of overheating is past, the tobacco is packed in casks and carried to the public warehouse, where it is examined; if pronounced good, a transfer note is given to the owner, and it is permitted to be exported; if it be bad and unsaleable, it is publicly burnt, and the certificate refused.

Tobacco, as it arrives in this country, has undergone a second fermentation, or *sea-sweat*, as it is termed; and acquires a dark brown hue, and a soft texture. Its odor is strong, and to many not very agreeable; it tastes bitter and very acrid, and when burned, emits sparks, continuing to burn after it has been lighted, resembling the deflagrating of paper that has been soaked in nitre, to which salt, indeed, tobacco owes this mode of burning. It yields its properties both to water and to alcohol; and when distilled *per se*, affords a green essential oil, which is a virulent poison. The expressed juice of the fresh leaves has been analyzed by Vauquelin, the celebrated French chemist, who found in it a considerable quantity of vegetable *albumen or gluten;* some *super-malute of lime, acetic acid, nitrate and muriate of potassa;* a *red matter*, soluble in alcohol and in water, the nature of which is still unknown; *muriate of ammonia*, and a peculiar acrid, volatile principle, which Vauquelin termed *nicotiana*, from the generic name of the plant. To this substance and the volatile oil, the properties of tobacco, both in an economical and medicinal point of view, are to be attributed. I shall notice the peculiar properties of each of these principles in its proper place.

Raleigh found tobacco cultivated in Trinidad, on his first visit to it in 1593; but it was not introduced into Virginia until 1616, when its growth there was commenced under the government of Sir Thomas Dale. It is now also raised in the Brazils, Demerara, Cuba, St. Domingo, the Cape of Good Hope, and in India. Sir W. Raleigh introduced its culture into Ireland, on his estate at Youghal, in the county of Cork; and it is still produced to a small extent in Carlow, Waterford, and Kilkenny, although it has ceased to be raised in England and Scotland since 1782. Before that period, it was extensively reared in the North-Riding of Yorkshire; and in the neighborhood of Kelso, in Scotland, not less than one thousand acres were covered with it. How far the prohibition of its growth at home is to be regarded as an act of legislative wisdom, I must leave others to determine.

The history of tobacco, as a luxury, is a striking illustration of the inefficiency of human laws to control the inclinations of mankind. When Columbus discovered the continent of the Western world, he found that, in some of the religious ceremonies of the Indians, a plant was thrown into the fire, the smoke of which, ascending, produced the same effects upon the officiating Piache, as the mephitic vapors of Delphos upon the Pythian priestess; responses were given, and oracles delivered, under the influence of a peculiar intoxication. This plant was tobacco; which was probably used, also, as a luxury by the subjects of Montezuma, as it was smoked over the whole of America at the period of the Spanish conquest. Its introduction into the Old World soon followed; and although it was opposed by every power, both civil and religious, yet its use has become so general, that it is not only regarded as the solace and enjoyment of the luxurious in every rank of life in civilized Europe, but has been introduced wherever Europeans have found their way; even into the islands of the Pacific Ocean, by their adventurous discoverers. "In the Sandwich Islands," says Kotzebue, "Tobacco is now so generally used, that young children learn to smoke before they walk, and grown up people carry the practice to such an excess that they have fallen down senseless, and often died in consequence.

There is reason for believing, that the first time the Spaniards saw tobacco smoked, as a luxury, was at an amicable interview between Grijalva, a Spaniard, and the Cacique of Tabasco, after a victory which Grijalva, who, under the auspices of Velasques, conducted an expedition from St. Jago de Cuba, in 1518, had gained over the Indians, at Potonchan. It was from the name of the place of this interview, which is indiscriminately called Tabasco and Tabaco, that the plant received the appellation, which Hernandez de Toledo then imposed upon it, and which it still retains.

In the following year, 1519, Cortez, who had commenced his career of ambi-

tion, transmitted a propitiatory present to Charles, as a specimen of the wealth and productions of the territory he had conquered for him: as a part of this tribute, tobacco first found its way into Europe, and, through the Venetian and Genoese traders to the Levant, it was introduced into Turkey, Arabia, Persia, and the whole of Asia. It was not, however, until the middle of this century that it attracted considerable notice.

In 1561 some seeds of tobacco were given by a Dutch planter to Jean Nicot, Lord of Villemain, and Master of Requests in the French court, who was then the Ambassador of Francis II. in Portugal. Nicot sent them to Catherine de Medicis, who afterwards patronized it as a medicine; and thence it obtained the name of Herbe à Reine until her death. The generic name, *Nicotiana*, was imposed by Linnæus; and is the appellation now employed.

About this period, the monarchs of the world combined, as it were, to crush, by force, the evils which they anticipated from the introduction of tobacco into their dominions. In England, Elizabeth published an edict against its use, assigning as a reason, that her subjects, by employing the same luxuries as barbarians, were likely to degenerate into barbarism; and in the following reign, James wrote his celebrated "Counterblaste to Tobacco," in which he remarks that the custom of smoking "is loathsome to the eye, hateful to the nose, harmefull to the braine, dangerous to the lungs; and in the black stinking fume thereof, nearest resembling the horrible Stygian smoake of the pit that is bottomless;" whilst, at the same time, he imposed a prohibitory duty of six shillings and eight pence per pound on its importation, and enacted that no planter in Virginia should raise more than one hundred pounds of it in one year.

Charles continued this impost, and made tobacco a royal monopoly, as it is at the present period, in the Netherlands and in France. An amusing fact, connected with the opposition to its general use, is related of Fagon, the physician to Lewis XIV.: in the midst of an oration on the pernicious effects of tobacco, the orator made a pause; and, taking his snuff-box from his pocket, refreshed himself with a pinch to enable him to renew the argument.

In 1590 Shah Abbas prohibited the use of tobacco in Persia by a penal law: but, so firmly had the luxury rooted itself in the minds of his subjects, that many of the inhabitants of the cities fled to the mountains, where they hid themselves, rather than forego the pleasure of smoking.

In the beginning of the next century, in 1624, Pope Urban VIII. anathematized all snuff-takers, who committed the heinous sin of taking a pinch in any church: and so late as 1690, Innocent XII. excommunicated all who indulged in the same vice in Saint Peter's church, at Rome.

In 1625 Amurath IV. prohibited smoking as an unnatural and irreligious custom, under pain of death: few, indeed, suffered the penalty, yet, in Constantinople, where the custom is now universal, smoking was thought to be so ridiculous and hurtful, that any Turk who was caught in the act, was conducted in ridicule through the streets, with a pipe transfixed through his nose.

In Russia, where the peasantry now smoke all day long, the Grand Duke of Moscow prohibited the entrance of tobacco into his dominions, under the penalty of the knout for the first offence, and death for the second; and the Muscovite who was found snuffing, was condemned to have his nostrils split. So great, indeed, was the animosity of the government against tobacco, in every form, that a particular tribunal, the Chambre au Tabac, for punishing smokers, was instituted in 1634, and not abolished until the middle of the eighteenth century.

Even in Switzerland, war was waged against the American herb: to smoke, in Berne, ranked as a crime next to adultery; and in 1653, all smokers were cited before the Council at Apenzel, and severely punished. But, like many bad, and all persecuted customs, tobacco triumphed over its opponents; it is now cultivated in both hemispheres of the globe; and the importation of tobacco and snuff into Great Britain alone, in 1829, amounted to 16,880 hogsheads.

It has been stated that tobacco was discovered by the Spaniards in Yucatan, in 1518; but Humboldt asserts, that it was cultivated, from time immemorial, by the natives of the Orinoko; where it is called *Petun*, *Pote-ma*, and *Piciel*. It was, soon after its discovery, transported to the West Indies; particularly to Cuba, the tobacco of which is still the most highly prized; and to North America, where it has been most extensively cultivated.

One curious circumstance connected with its cultivation in Virginia is worth

noticing: the planters, in the beginning of the seventeenth century, being all bachelors, regarded themselves merely as temporary sojourners in the colony; the London Company, which was established in 1606, for the colonization of Virginia, with a view to their steadiness, sent out a number of respectable young women to supply the settlers with wives. These ladies were actually sold for one hundred and twenty pounds of tobacco each, being the quantity considered as equivalent to the expenses of the voyage.

Let us now inquire into the various uses to which tobacco is applied, and its medicinal properties. It is used, as a luxury, in three ways:—for chewing, smoking, and snuffing.

1. *Chewing Tobacco.*—The origin of this custom has not been traced, but it probably sprang from the desire to extract the entire tobacco, a substitute for the fermented juice, the *moo*, which has been already noticed. At this day, the women in the province of Varinas carry this inspissated liquid in "a small box, which they wear like a watch, suspended to one side at the end of a string. Instead of of a key, it is furnished with a little spoon, which they help themselves from time to time, of this juice, relishing it in their mouths like a sweetmeat." Chewing tobacco has always been confined chiefly to the lower classes, and seafaring men, whose avocations do not always permit the means of smoking, and who cannot afford to snuff. Habit enables many chewers to swallow the saliva with impunity, although the strong infusion introduced into the alimentary canal is a virulent sedative poison. The celebrated canon of Saint Victor, Santeuil the poet, fell the victim of a practical joke with tobacco. He was much distinguished for the liveliness of his disposition and his wit. At one of those entertainments, at which he was a constant guest, some young men, thinking it would be a pleasant jest, made him drink a glass of wine, into which a tobacco-box, filled with Spanish tobacco, had been emptied. He was suddenly seized with the most violent vomitings, and, in a few hours afterwards, died in the greatest tortures. The saliva of a chewer of tobacco, when swallowed, affects the stomach nearly in the same manner as opium, taking off the sensation of hunger, and enabling those who indulge in it to sustain the want of provisions for a great length of time. An anecdote, strikingly illustrative of this fact, was related to the author of this notice by an old gentleman, who, in the early part of his life, was employed in collecting furs in North America:—"Having, with his party, by some accident, lost his path in the woods; the provisions were exhausted, when he fortunately encountered three Indians, who were, also, engaged in hunting. He solicited some provisions from them; but was informed they had none. He then begged for some tobacco. Alas! there was only one solitary quid in the company, and that was half masticated; but, with the feeling of true benevolence, the Indian took it from his mouth, divided it, and presented one-half to the Englishman, who accepted it; and declared that it was the sweetest morsel he had ever enjoyed." The tobacco for chewing is shag tobacco, cut from Richmond tobacco, being first wetted, and afterwards dried in a hot pan. What is termed roll tobacco is formed into a cord, of a moderate thickness, by depriving the leaf of its veins, moistening it, and after pressing it in a powerful press, so as to extend the oil over the whole equally, twisting it, or, as it is termed, spinning it.

2. *Smoking Tobacco.*—This mode of using tobacco was known in America, at the period of its discovery by Columbus, and so highly prized, that, like the Olive, the *Calumet* was the symbol of peace and concord. It has been supposed that smoking was unknown in the Old World before the discovery of America, but Mr. Brodigan has advanced the following evidence against this supposition:—

"Herodotus asserts that the Massagetæ, and all the Scythic nations, had among them certain herbs which they threw into the fire, the ascending smoke of which, the company seated round the fire collected, causing them to dance and sing."

Strabo also says, that "they had a religious order amongst them, who frequently smoked for recreation, which, according to Pomponius Mela, a geographical writer in the time of Claudius, and Solinus, they received through tubes."

The ancient Scythiæ smoked narcotic herbs through wooden and earthen tubes; and Mr. Brodigan states, that in the year 1784, some laborers digging at Brannockston, in the county of Kildare, a spot where a battle had been fought, in the tenth century, between the Irish and Danes, discovered an ancient "tobacco-pipe sticking between the teeth of a human skull." Many similar pipes, which were of course earthenware, lay scattered among the bones in the stone coffins.

But, although the word tobacco-pipe is employed by Mr. Brodigan, yet, there is no evidence to prove that the pipes found on this occasion, which have also been dug up in England, and attributed to the Danes, were used with tobacco. These facts, however, are sufficient to prove that smoking herbs with a pipe is a very ancient custom. *Cigar* or *Cheroot* appears to have been first used in the East Indies, although the best segars are now brought from the Havana; and, at this time, are exactly worth their weight in silver in the London market.

There is every reason for believing that smoking tobacco was introduced into England on the return of Drake's fleet; and, it is asserted, that Sir Walter Raleigh was the pupil of Captain Lane, one of Drake's officers, in the acquirement of this elegant accomplishment. He soon set the fashion; and, in communicating the art to his friends, gave smoking parties at his house, where his guests were treated with nothing but a pipe, a mug of ale, and a nutmeg. From the anecdote related in this volume, respecting the weight of smoke, the vapor of the pipe certainly did not throw a cloud over the brilliant wit of the unfortunate Raleigh.

The soothing influence of a pipe has proved so agreeable to men of philosophic and contemplative minds, that smoking may almost be designated the pastime of the sage. Sir Isaac Newton, Hooker, and many other scientific and literary men, might be named as proofs of the truth of this assertion. But on those unaccustomed to it, smoking produces very unpleasant effects, which have sometimes terminated fatally. The first symptoms are elevation of spirits, with an accelerated and strengthened pulse; but this excitement is transient, and is soon followed by vertigo, sickness, fainting, and a weak tremulous pulse, indicating a powerful degree of collapse. Sometimes these symptoms quickly subside, on removing from the atmosphere of the smoking-room; at other times, they have been known to continue for forty-eight hours. I have an instance of the kind, at this time, under my eye: and Gmelin has related two fatal cases of excessive smoking, in one of which seventeen, and in the other eighteen, pipes were smoked at a sitting. It is, nevertheless, well known, that some German professors are in the habit of smoking, daily, from fifteen to eighteen pipes with impunity.

As smoking is a species of distillation, the *Nicotina*, or sedative principle of the tobacco, being more volatile and less condensable than the essential oil, chiefly comes over with the smoke, and acts upon the nervous energy of the habit through the medium of the lungs. When the quantity is excessive, it paralyzes the heart, rendering it insensible to the stimulus of the blood, and the circulation ceases.

The experiments of Mr. Brodie have demonstrated that the essential oil is more poisonous than the infusion of tobacco, which contains, like the smoke, *nicotina*; but it kills by exciting convulsions and coma, without affecting the heart. This oil accumulates in old tobacco-pipes. The poisonous effects of it are thus mentioned by Mr. Barrow:—"A Hottentot applied some of it from the short end of his wooden tobacco-pipe to the mouth of a snake, while darting out his tongue. The effect was instantaneous as an electric shock—with a convulsive motion that was momentary, the snake half untwisted itself, and never stirred more; and the muscles were so contracted, that the whole animal felt hard and rigid, as if dried in the sun."

The tobacco most prized for smoking is that reared in Cuba and on the Rio Negro; that of Cumana is the most aromatic. The Havana segars are esteemed in every part of the world where smoking is indulged. The coarse, acrid tobacco chiefly employed by the lower classes of the people in the country, is the produce of Virginia; and on the Continent, that of Brazil and of Santa Cruz. Tobacco grown in the East Indies is not much esteemed in Europe. The produce of the Levant is mild and weak, with a sweet or honey-like flower.

3. *Snuffing Tobacco.*—If smoking has been carried to excess, snuffing has been still more abused; although it is questionable, whether any cases of death ever occurred from taking too much snuff.

A collection of snuffs from various parts of the world, and the history of them, would form a singular specimen of ingenuity idly exercised, in varying the form and quality of a powder, merely intended for the titillation of one set of nerves. In this country, the snuffs, like the varieties of sheep and geraniums, may all be traced to one stock—the Rappee, which derives its name from having been originally produced by rasping what is called a carot of tobacco. To form this, the leaves of tobacco, freed from their stems and veins, are fermented and pressed closely together into the shape of a spindle, and retained in that shape by cords

wound round them. Scotch snuff, which is also the basis of many snuffs, is made from tobacco, with the midrid and veins left in the leaves, which are first fermented, then dried before a strong fire, and afterwards ground in mills, resembling a large mortar and pestle.

It would be useless to mention half the snuffs that are in fashion. The rappee and the Scotch snuff are the basis of the greatest number of them, the variety of flavor being communicated by the admixture of different proportions of the three following:—*Sevillo* snuff, the best Spanish, made from the Cuba tobacco; *Macaba*, made from tobacco grown on the banks of the Maracaibo in Venezuela, and called *Tobaco de Sacerdotes;* and *Masulipatam*, made from a very broad-leaved tobacco; but, of what species it is, the writer of these notices is ignorant. It has been asserted, that common salt, sal ammoniac, and even ground glass, and other objectionable articles, are added to the tobacco in the manufacture of snuff; but these admixtures are unknown in this country, if they be employed elsewhere; and the whole art of making snuff depends on the mode of drying the leaves, the degree of fermentation that they have undergone, and the proper admixture of the different varieties.

Long before the introduction of tobacco, sneezing-powders or sternutatories were in vogue. These had been medicinally employed from the time of Hippocrates; and the use of them had degenerated into a habit with the Irish and some other nations. If the description of a fop by Shakspeare, in his play of Henry the Fourth, refer to Cephalic powder, the custom, probably, also prevailed in England:—

> "He was perfumed like a milliner,
> And 'twixt his finger and his thumb he held
> A pouncet-box, which ever and anon
> He gave his nose."

Be this as it may, soon after the introduction of tobacco into England it was generally employed in the form of snuff by both sexes; and was allowed even in the royal presence. The gallants of those days, indeed, seem to have been as extravagant in their snuff-boxes, as particular in the nature of their contents, and as affected in the use of them, as the silliest of our modern fops. "Before the meat came smoking to the board," says Dekker, "our gallant must draw out his tobacco-box and the ladle for the cold snuff into the nostril, all which artillery may be of gold or silver, if he can reach to the price of it; then let him show his several tricks in taking it, as the whiff, the ring, &c., for these are complements that gain gentlemen no mean respect." The custom of raising the snuff with a spoon to the nostrils was not confined, however, to the fop and the courtier; for, as appendages attached to the mull of the Scotch highlander, we find not only a spoon, but also a hare's foot, to brush the snuff from the upper lip, indicating the excess to which this indulgence was carried. The quantity of snuff taken by many octogenarians of the present day is almost incredible, and only exceeded by the excesses of some of their early contemporaries who have gone before them. The late Arthur Murphy carried his snuff in his waistcoat pocket, and used it wholesale; and I have known many literary men who emptied three or four large boxes in a day. As in the abuse of opium and wine, the indulgence in snuff increases the desire for it, until the habit becomes too deeply fixed as not to be eradicated; indeed, the power which the animal system possesses of accommodating itself to the excitation of artificial stimulants, is well illustrated by the effects of snuff on the sensitive nerves of the olfactory organ. In the uninitiated a small pinch produces a stimulant effect, which is communicated by nervous sympathy to the whole of the respiratory system of muscles, which are thrown into convulsive action or sneezing, whereas no quantity is capable of causing this effect on the veteran snuffer, so much does the constant repetition of impression diminish the sensibility and irritability of the Schneiderean membrane. It would be curious to determine whether, in this effect of snuff, the same principle that impresses the odorous sensation on the nerves of smelling, affords the stimulus to those of sensation which cause the sneezing, and the increased action of the pituitary glands to augment the quantity of the lubricating mucus of the organ.

Snuffing, as it is the most frequent and inoffensive to others, is also the least injurious manner of using tobacco as a luxury; although, in those unaccustomed to it, like smoking, it not only causes sneezing, but nausea and vertigo. In great snuf-

fers, the stomach frequently suffers, and dyspeptic symptoms supervene, accompanied with pains and torminia, or a twisting sensation of the bowels. This may arise, in part, from the snuff passing into the pharynx and being swallowed; although it is also possible that it may depend on sympathy. Snuffing is frequently injurious to weak and nervous people; and some physicians, among whom was the celebrated Lorry, have ascribed to its use the frequent occurrence of nervous diseases. It is, however, unfortunate for this opinion, that in the royal snuff manufactories of France, comprising a population of above 4,000 persons, the workmen are not subject to any special diseases, and they live on an average as long as other people; in addition to the fact, that the most inordinate use of it has not often produced nervous affections.

Snuff, we have said, has been recommended as an errhine or promoter of the discharge of the nostrils in a tendency to apoplexy; but although the quantity of the fluid discharged may cause the depletion of the vessels of the head, yet, on account of its narcotic quality, snuff ought to be employed with caution; and as we occasionally see great snuff-takers seized with apoplexy and palsy on suddenly leaving off its use, there is sufficient reason for regarding it as a less proper errhine than many other substances.

The hints that have been given of some of the medicinal properties of tobacco, leave little to be said on this head. Its medicinal qualities were early known; it was named Herba panaces, and admitted into the Materia Medica of France in 1562: and, probably, the abuse of it as a medicine gave rise to many of the objections to its introduction into general use, which were afterwards nurtured by prejudice and falsehood. We observe the credulity of its evil effects carried to an absurd length in the Counterblaste, to which we have already referred:—"It makes," says the royal author, "a kitchen, also, oftentimes in the inward parts of men, as soyling and infecting them with an unctuous and oily kind of soote, as hath been found in some great tobacco-takers, that after their death were opened." And not less strong is the prejudice displayed in the following opinion of a man of superior intellect, the celebrated author of the Anatomy of Melancholy:—

"A good vomit I confesse; a vertuous herbe, if it be well qualified, opportunely taken, and medicinally used; but as it is commonly used by most men, which take it as tinkers do ale, 'tis a plague, a mischiefe, a violent purger of goods, lands, hellish, develish, damned tobacco; the ruin and overthrow of body and soule."

The medicinal properties of tobacco are, nevertheless, considerable; it induces narcotic, sedative, emetic, cathartic, diuretic, and errhine effects, according to the manner of administering it and the extent of the dose. Its active principles are, undoubtedly, the *Nicotina*, and *the essential oil which it contains;* before, therefore, noticing its medicinal and poisonous qualities, let us understand the nature of these principles separated from the plant.

Nicotina, when pure, is a colorless substance, having an acrid taste, and the odor that distinguishes tobacco: it resembles, in some respects, the volatile oils, is volatile, and soluble in water and alcohol, forming solutions which have the taste and odor of Nicotina. When tincture of galls is added to these solutions, the Nicotina is precipitated. Applied to the nostrils it causes the most violent sneezing, and is also extremely poisonous when swallowed. It is procured from tobacco by a very operose process.

The *essential oil* of tobacco is of a green color, hot and pungent to the taste, and a virulent poison. It is procured by the distillation of the leaves.

To determine the mode in which tobacco affects the living frame, Dr. Wilson Philip made a number of experiments, with a strong aqueous infusion of it, on frogs. He found that when it was introduced into the heart, this organ immediately became paralytic, and that the same state occurs when it is applied directly to the brain, or when thrown into the stomach and intestines. He thence concluded, that in every instance it acts only through the medium of the brain, to which it is conveyed by the blood. Some subsequent experiments of Professor Macartney, of Dublin, have, however, demonstrated, that it is on the extremities of the nerves that tobacco acts with most energy; and the still more convincing investigations of Mr. Brodie afford every reason for thinking that tobacco operates in two distinct ways, according to the form in which it is used. When a strong infusion was introduced into the intestines of a dog, it killed the animal in ten minutes, by paralyzing the heart, which was evident from arterial blood being

found in the aortal cavities after death; but when the essential oil was employed, convulsions and coma were excited, and death followed without the heart being affected. The same symptoms presented themselves when the oil was applied to the tongue of a young cat; and the powerful influence of it is well illustrated by the account of its effects on a snake. Now, as the only active principles contained in tobacco are *nicotina* and *essential oil*, we are disposed to regard the former as a direct sedative, which acts chiefly on the sentient extremities of the motor nerves, and the latter as a powerful stimulant, operating through the influence of the brain and spinal marrow. Is it the essential oil that causes the primary or stimulant effects of tobacco, and the nicotina that induces the depression and collapse that follow? Experiments are still required to determine this point.

Notwithstanding these violent effects of tobacco, it is a useful medicine, under judicious management. Its fumes, when smoked, are narcotic, relieving the difficulty of breathing in spasmodic asthma, and allaying the pain of toothache; and Humboldt states, that it is employed in South America, by the higher classes, to facilitate the siesta after dinner. The very sickness and debility which it causes are taken advantage of, to relieve the incarcerated hernia, ileus, and obstinate constrictions, by introducing either the smoke or the infusion into the intestines when other remedies fail. The infusion has been employed as an emetic, but the practice is very dangerous; and even its employment in small doses as a diuretic, in dropsical affections, cannot be much commended. In one spasmodic affection, however, connected with the secretion of the kidney, its influence is taken advantage of, when the patient is not of a delicate habit of body. It is not unfrequently employed by the unprofessional, as an external application in cutaneous eruptions, and especially in ring-worm of the head, (Porrigo *Scutulata*,) but we have witnessed the most violent sickness, giddiness, and alarming fainting follow the use of a tobacco lotion; and there is much danger if the skin be abraded. In the Orinoko the natives apply chewed tobacco to the bite of poisonous snakes.

For the purposes of internal administration, the London College of Physicians order a drachm of tobacco to be macerated for an hour, in a pint of water; but, even in this degree of strength, the infusion sometimes produces violent effects. Instances are recorded of two drachms, instead of one drachm, of the leaves being employed, and proving fatal.

The Edinburgh College orders a wine of tobacco, which may be given in doses of from ten to thirty drops: and a syrup of it is employed on the Continent. Like every other powerful medicine, tobacco may be rendered available of much good, when prescribed with judgment and discrimination; but it becomes a most frightful weapon in the hands of the ignorant and indiscreet.

From the effects of the tincture of galls in producing an insoluble and consequently inert compound with nicotina, galls, either in infusion or tincture, should be administered in instances of poisoning by overdoses of tobacco: under any form in which it is taken into the stomach; whilst, at the same time, ammonia, brandy, and other stimulants, are requisite to rouse the depressed energies of the nervous system. When the danger is pressing, the respiration should be supported by artificial means, and kept up until the narcotic influence of the poison is exhausted.

Such is the nature of this potent herb; and such have been the origin and dissemination of tobacco; an object of secondary importance as regards the life of Raleigh; but yet so familiar, and productive of such important results, as to awaken general curiosity regarding it. The arms of the Romans spread the arts of civilized life among the untutored nations, over whom they triumphed; the enterprise of one of their conquered provinces, a thousand years after the overthrow of their empire, transported an insignificant herb, from the western hemisphere, whose influence has extended over nations the existence of which was unknown to the masters of the world. Among the Indian tribes, the calumet is the symbol of the peace and concord of nations; in Christendom, the powder of the herb that confers its charm, is that of amicable intercourse and social amity between man and man; its smoke, rising in clouds from the idolatrous altar of the native Mexican, opened the world of spirits to his delirious imagination; to the inhabitants of the opposite hemisphere, whilst it has furnished the means of encouraging folly, pampering luxury, and waging war, it has, at the same time, contributed to lessen the sum of human misery, by allaying pain, and even assisted in extending the boundaries of intellect, by aiding the contemplations of the Christian philosopher.

2.—FRUIT CULTURE FOR THE SOUTH.

(Continued.)

Plums.—There are many varieties of native plums found in this country, but the finer varieties of cultivated plums were introduced from the south of Europe. The plum, like the peach, may be propagated from seeds, or by grafts—seeds, where new varieties are wanted; and grafts, where an old established kind is to be propagated. Graft below the ground, as directed for the apple, in roots of the plum, peach, or sloe, of one year's growth; and if grafted from a healthy fruit-bearing tree, the graft will produce fruit the third year. The plum tree will grow in almost any soil, and is very luxuriant in a light sandy soil: but to produce fruit it must have a stiff heavy clay, or a loam with a clay sub-soil. The great enemy of the fruit is the curculio, or plum weevil. This is a brown bug or beetle, about the size of a pea bug, which makes its appearance about the time the fruit is forming in the bloom. This bug has a proboscis, and makes a puncture in the young fruit in the form of a crescent; in this he deposits an egg; the wound soon heals, the egg hatches out a worm, and the worm eats inwardly until it reaches the kernel, when the fruit drops; he now eats his way out, burrows in the ground, where he goes through a chrysalis state, and next spring comes out a curculio, ready for his work of destruction again. It is observed that where soils are very stiff, the worm cannot force his way in, and consequently perishes; for this reason, stiff clay soils are absolutely necessary for the perfection of the fruit. Paving around the tree has proved of great service; but whether it is the instinct of the curculio which teaches it to shun those trees where there is no chance of propagating itself, or whether it is the fact of so many of the worms perishing on the pavement, has not yet been determined. Wherever the plum orchard is, it should be a hard trodden yard, with hogs, geese, and other poultry, ranging through it. The curculio seems to be the natural enemy of all the thin-skin fruits, and is a very shy and timid insect, dropping to the ground at the least jar of the tree. I have tried many experiments to get clear of him, but to no purpose. Salt has been recommended. I have found salt a fine invigorator of the plum tree, but no preventive against the curculio. There are localities around us where the plum flourishes, and yields heavy crops, but invariably the soil is stiff clay. The other diseases which the plum is subject to in the northern states we are exempt from here; our only enemy is the curculio, and his name is legion. The plum tree requires little or no pruning; as the tree gets old, shorten in the branches, to produce new wood.

Nectarines.—The nectarine is only a variety of the peach, with a smooth skin. Its culture and propagation are in all respects like the peach, but, like the plum, it is subject to the attacks of the curculio, and should be planted in stiff soil, to secure fruit.

Apricot.—The apricot is found wild in Asia and America, and is one of the thin, smooth-skin fruits, between the plum and peach. It is desirable for its early bearing, being the first of all the stone fruits that ripen; but, like the plum, it is haunted by that scourge of thin-skin fruits, the curculio, and should be treated accordingly. It may be propagated by seeds or by grafting. Graft under ground, as directed for the apple, on roots of plum, peach, or apricot, and if grafted from fruit-bearing trees, two years will give fruit from the graft. From the early blooming of the apricot, the blooms are extremely liable to be killed by frosts; the tree, therefore, should be planted in the most exposed situations to prevent the too early blooming. The plum, nectarine, and apricot, must all be planted in stiff soils, or constantly watched, and shaken during the fruiting season, and the insects destroyed, or they cumber the ground, and, like Dead Sea fruits, perish before they come to the lips.

Cherry.—The cherry was introduced into Europe, from Asia, by the Romans, and into this country by our English ancestors. The Morello is quite easy of culture and propagation, growing readily from seeds, and flourishing in almost any soil. But the finer varieties of English cherries must be grafted. Graft

on one year old roots of the Morello, as directed for the apple, and bearing trees will be produced in three years. The English cherry cannot stand our long, hot summers; the bark becomes blistered, and the tree cracks and dies; to prevent this, shade the tree. It is well to box the tree, up as high as the limbs, as we find ornamental trees in towns, to prevent the barking by cattle; have the box bored full of holes, to let in light and air.

The north side of a house is the most appropriate place for the English cherry. The English cherry may also be grafted on a three-year-old Morello, in the limbs, as the Morello stands the sun better than the English. The foliage of the graft protects it from the sun, and all the fine varieties of English or French cherries may be propagated and cultivated in this manner.

Quince.—The quince is a native of the south of Europe, and was introduced into this country by the early settlers. It is one of the easiest trees propagated from, growing freely from cuttings. It is well adapted to southern culture, and will grow in almost any soil; for this reason, it is too often neglected, and suffered to be overrun with weeds and bushes; knotty and stunted fruit is the consequence. There is no tree bears higher manuring, and none that pays better for it. It is a mistaken notion that the quince requires a low, damp locality; from the fact they will grow there, has led many to believe that it was its natural habit. But the finest quinces I have ever seen in any country, were grown on high, dry lands, in Chambers county, Alabama. The tree is inclined to sucker; these should be kept down, and a tree encouraged instead of a bush, which will improve the quality of the fruit. Where the ground is shaded around the roots with straw, the fruit is much larger and finer. It is observed that southern quinces are not as acid as those raised north, which is probably owing to the climate. As a preserving fruit, the quince ranks among the first in the country.

Grape.—This is one of the oldest fruits in existence, having been extensively cultivated by the earliest fathers for wine. It is found in almost every clime, and is indigenous here. Our native grapes are superior for southern culture to any of the foreign varieties that have yet been introduced. It is easy of propagation, growing freely from cuttings and layers. In a deep, rich soil, abounding in lime, the grape is a long-lived plant, but from some cause, not yet explained, they are becoming a short-lived plant in Middle Georgia and Alabama; eight to ten years being their average life; but they are so easily propagated and produce fruit so quickly, that it is almost like serving an annual crop. Most of the grapes strike freely from cuttings, and bear freely the second year, and the third are in their greatest perfection. Among the grapes which strike frequently from cuttings, the Catawba and Warrentown are found to suit our own locality better than most others; being fine table grapes, and excellent for wine. Grape cuttings may be put out either in the fall or spring; let there be from three to five buds on the cutting; make a smooth, clean cut; place the cutting nearly horizontal in the ground, leaving out two buds; when the bud begins to swell, pinch off the weakest bud. The grape delights in a calcareous soil, and where it is not found, lime should be freely used; no heating manures should be applied around the grape vines, but the mould from swamps, ashes, gypsum, soapsuds, and, added to this, the best manure I have ever found for grapes is shade—shade to the roots. Cover the ground with leaves or straw as far as the roots extend, which keeps the roots cool and moist. Grape vines with us do not require the pruning that the Europeans give them. Any time between October and February, take out all the dead wood, and where the vine has become too scraggling and long jointed, cut, to force new and thicker branches. The grape is sometimes affected with mildew or rot. This is caused by frequent changes in the weather, and will hardly ever occur if the ground around the roots is properly mulched; for whatever changes may take place in the atmosphere, there is always an even temperature around the roots, which gives health to the fruit. The Scuppernong, a native white grape of North Carolina, is better adapted to southern culture than any other grape, growing in any kind of soil and almost any situation; it however does not strike freely from cuttings, but must be layered or grafted. It is fully equal as a table, and superior as a wine grape, to any grape that I am acquainted with; it is superior for arbors and

trellis-work, growing rapidly and holding its foliage for a long time There are but few diseases that the grape is subject to here.

The aphis, or ant cow, is a troublesome insect, not so much from the actual damage that they do, as the unsightly appearance they give to the ends of the vines. A sprinkling of Scotch snuff, when the dew is on the leaf, will soon exterminate them.

Pomegranate.—This beautiful fruit was first introduced from the south of Europe, and flourishes well in all this section. It is easily propagated by seeds, layers, or by cuttings. They grow in almost any kind of soil; but a rich, sandy loam suits them best; they require little or no pruning, merely taking out the dead and decaying wood. There are several varieties, but the sweet fruited is preferable for the dessert. It is not so much the value of the fruit, as its peculiar beauty, that leads to its cultivation; being extremely beautiful when in flower or fruit. No ornamental grounds should be without it.

Fig.—This, like the grape, is one of the oldest fruits cultivated. It probably originated in the Garden of Eden, and is the only fruit that has come down to us unimproved, from that prince and father of horticulturists, Adam himself. We find no account of an improvement in its culture, but figs six thousand years ago were probably the same as the figs of to-day. The fig is easily propagated, by cuttings, layers, or dividing the roots, and will grow in almost any soil, but the fruit is of superior flavor when grown on a rich sandy loam. It is liable to be winter-killed in this section, and should therefore be planted in an open exposure, where it may get all the cold to retard its early budding. It is rarely killed in the winter, until the sap has commenced rising. It is well to prune the bush so as to form a tree, as it is better able to bear the cold of winter. A barren fig may sometimes be made productive, by pruning the roots. When a winter is very severe, a fig tree may be protected from the cold by applying a good coat of stable manure around the roots, covering the ground around the tree, about six inches deep. There are many varieties, and all have their advocates. The fig should receive more extensive culture.

Strawberry.—This favorite fruit is a native of most of the states of the Union, and has been brought to its present high state of perfection by hybridizing and careful culture. The finest strawberries grown in the universe are of American origin. The people of the South have labored under a great mistake, in supposing strawberry culture not adapted to the South. I assert, without fear of successful contradiction, that there is no country under heaven better adapted to the cultivation of this fine fruit than the southern part of these United States. Strawberries may be propagated by seeds, or by runners—seeds, when new varieties are wanted; and by runners, where an established variety is to be perpetuated.

I have no doubt that the principal reason why so many have failed in the culture of the strawberry here, is, too high manuring. Most of the directions for strawberry culture, which we get from the North, urge the importance of high manuring. I started the strawberry culture with Hovey's seedling, manured high, and for four years never had a berry. At length a friend informed me, that, when surveying the Indian lands in Russell county for the government, riding a white horse, his legs were frequently stained by the juice of the strawberries, half-way up to the knee. I concluded that if they grew thus wild, I would try and imitate nature. In the first place, the strawberry-grower must understand the difference between the staminate and pistillate, or, in other words, the male and female plants. There are three grades of plants: the entirely staminate or male; the entirely pistillate or female; and the hermaphrodite, blending the staminate and pistillate together. The pistillate varieties are the most productive, when properly impregnated, as every bloom will make a fruit. The entirely staminate produce no fruit at all, and as they produce a great quantity of runners, they are very apt to run out all the fruit-bearing vines. The hermaphrodites are good bearers, and answer for impregnators to the pistillates, too. In selecting a bed for strawberries, select a piece of light, porous, rich ground. Plow or spade it well, and at any time from October to February, plant out the bed; let the rows be two feet apart, and plant six rows of the pistillate, one foot apart in the row, and now one row of staminate, or

hermaphrodite, every sixth row, being the impregnators. Apply no animal manure, but keep the bed well covered with partially decomposed leaves; and every spring dress the bed with ashes, either leached or unleached. Keep down the runners through the fruiting season. It is worthy of remark, that the pistillates, from their enormous productiveness, rarely make runners in the fruiting season. When the bed has become matted over with vines, go over it with hoes, and cut the vines up, leaving a stand of healthy vines, at proper distances; leave the vines to decay where they are cut, for they afford the best kind of nutriment to the living plant. When the vines commence bearing, give them copious waterings, which will cause the young fruit to swell and mature; it is very easy to distinguish between the male and female blooms; the staminate being a large, showy bloom, with long stamens filled with a yellow dust, or pollen; whilst the pistillate is a small, unpretending flower, without stamen or pollen, but with a simple stigma. It is observed of the pistillate kinds, that they bear much thicker planting than the staminate, frequently producing enormous crops of fine fruit, when the vines are matted together; but the season must prove a wet one to insure this. It is better to keep them worked out, and clean. I have had the Hovey's seedling to produce fruit ten months in the year, cultivated on this mulching principle, and in all the list of strawberries which I have ever tried, I have never found any to compare with the Hovey seedling, when impregnated with the large early scarlet. There are other varieties that are just as good as the early scarlet to impregnate with, for the common strawberry season; but as the early scarlet, like the Hovey, is almost a constant bloomer, it keeps the pistillates in constant bearing. There is a great difference in strawberry plants standing the droughts of our hot summers.

DEPARTMENT OF INTERNAL IMPROVEMENTS.

1.—RAIL-ROADS IN THE UNITED STATES ON THE 1st JANUARY, 1852.*

NAMES OF RAILWAYS.	Miles in operation.	Miles in construction.
MAINE.		
Androscoggin	..	36
Androscoggin & Kennebec	55	..
Atlantic and St. Lawrence	91	65
Bangor and Piscataquis	12	..
Buckfield Branch	10	..
Calais and Baring	6	..
Franklin	9	..
Portland and Kennebec	36	33
Portland, Saco and Portsmouth	52	..
York and Cumberland	12	41
NEW-HAMPSHIRE.		
Ashuelot	24	..
Boston, Concord and Montreal	76	17
Cheshire	54	..
Cochecho	18	..
Concord	35	..
Concord and Claremont	26	24
Contocook Valley	14	..
Great Falls	9	..
Great Falls and Conway	13	..
Manchester and Lawrence	26	..
New-Hampshire Central	26	..
Northern	82	..
Portsmouth and Concord	23	17
Sullivan	25	..
Wilton	18	..
White Mountain	..	18
VERMONT.		
Bennington Branch	..	6
Connecticut and Passumpsic	61	53
Rutland and Burlington	119	..
Rutland and Washington	12	..
Troy and Rutland	..	55
Vermont and Canada	38	..
Vermont Central	115	..
Vermont Valley	24	..
Western Vermont	..	53
MASSACHUSETTS.		
Berkshire	21	..
Boston and Lowell	28	..
Boston and Maine	83	..
Boston and Providence	53	..
Boston and Worcester	69	..
Cape Cod Branch	29	..

* Western Journal.

NAMES OF RAILWAYS.	Miles in operation.	Miles in construction.
Connecticut River	52	..
Dorchester and Milton	3	..
*Eastern	75	..
Essex	21	..
Fall River	42	..
Fitchburg	69	..
Fitchburg and Worcester	14	..
Grand Junction	7	..
Harvard Branch	1	..
Lexington and West Cambridge	7	..
Lowell and Lawrence	12	..
Nashua and Lowell	15	..
New-Bedford and Taunton	21	..
Newburyport	15	..
Norfolk County	26	..
Old Colony	45	..
Peterboro' and Shirley	14	..
Pittsfield and North Adams	18	..
Providence and Worcester	43	..
Salem and Lowell	17	..
South Reading Branch	8	..
South Shore	11	..
Stockbridge and Pittsfield	22	..
Stoney Brook	13	..
Stoughton Branch	4	..
Taunton Branch	12	..
Troy and Greenfield	..	67
Vermont and Massachusetts	77	..
†Western	157	..
West Stockbridge	3	..
Worcester and Nashua	46	..
RHODE ISLAND.		
Providence and Stonington	50	..
CONNECTICUT.		
Hartford and New-Haven	62	..
Hartford, Providence & Fishkill	51	..
Housatonic	110	..
Housatonic Branch	11	..
Middletown Branch	10	..
Naugatuck	62	..
New-Haven and Northampton	45	..
New-London, Willimantic and Palmer	66	..
New-London and New-Haven	..	55
New-York and New-Haven	76	..
Norwich and Worcester	66	..
Collinsville	11	..
Stonington and New-London	..	10
NEW-YORK.		
Albany and Schenectady	17	..
Albany and West Stockbridge	38½	..
Attica and Buffalo	32½	..
Buffalo and Niagara Falls	22	..
Cayuga and Susquehanna	33	..
Chemung	17½	..
Hudson and Berkshire	31½	..
Hudson River	144	..
Lewiston	3	..
Long Island	98	..
New-York and Erie	464	..
New-York and Harlem	130	..
Northern	118	..
Oswego and Syracuse	35	..
Rensselaer and Saratoga	32	..
Rochester and Syracuse	104	..
Saratoga and Washington	39½	..
Saratoga and Schenectady	22	..
Schenectady and Troy	20½	..
Skaneateles and Jordan	5	..
Syracuse and Utica	53	..
Tioga	15	..
Tonawanda	43½	..
Troy and Greenbush	6	..
Utica and Schenectady	78	..
Watertown and Rome	97	..
Albany and Northern	..	33
Albany and Susquehanna	..	130
Buffalo and State Line	26	41
Buffalo and New-York	..	58
Buffalo and Cohocton Valley	..	130
Canandaigua and Corning	46	..
Plattsburg and Montreal	..	25
Rochester and Niagara Falls	..	74
Rutland and Washington	28	..
Sackett's Harbor and Ellisburgh	..	17
Troy and Boston	..	39
Troy and Rutland	15	..
Canandaigua and Niagara Falls	..	92
Syracuse and Binghamton	..	70
Sodus Bay and Southern	..	35
Whitehall and Rutland	13	..
NEW-JERSEY.		
Belvidere and Delaware	15	40
Burlington and Mount Holley	6	..
Camden and Amboy	64	..
Morris and Essex	35	45
New-Jersey	31	..
New-Jersey Central	36	26
Paterson and Ramapo	33	..
Trenton Branch	6	..
PENNSYLVANIA.		
Alleghany Portage	36	..

* This includes the Eastern (N. H.) Railway, which is owned and operated by the Eastern (Mass.) company.

† This includes the Albany and West Stockbridge Railway in New-York, which is owned and operated by the Western Rail-road Company.

NAMES OF RAILWAYS.	Miles in operation.	Miles in construction.
Beaver Meadow	36	..
Carbondale and Honesdale	24	..
Columbia and Philadelphia	82	..
Westchester Branch	9	..
Corning and Blossburgh	25	..
Cumberland Valley	52	..
Hazleton and Lehigh	10	..
Little Schuylkill	20	..
Mine Hill	30	..
Mount Carbon	7	..
Pennsylvania	185	64
Phil., Reading and Pottsville	92	..
Phil. and Norristown	17	..
Germantown Branch	6	..
Phil. and Trenton	30	..
Phil., Wilmingt. and Baltimore.	98	..
Schuylkill Valley	25	..
Summit Hill and Mauch Chunk	25	..
Whitehaven and Wilkesbarre	20	..
Williamsport and Elmira	25	51
Franklin	22	..
Dauphin and Susquehanna	16	..
Strasburgh	7	..
Lykens Valley	16	..
Nesquehoning	5	..
Room Run	5	..
Pine Grove	5	..
Beaver Meadow Branch	12	..
York and Cumberland	25	..
Sunbury and Erie	..	240
Lackawanna and Western	50	..
Catawissa and Williamsport	..	89
Delaware and Susquehanna	..	48
Philadelphia and Westchester	..	25
Pennsylvania Coal Co.	47	..
Hempfield	..	77
Alleghany Valley	..	180
Columbia Branch	19	..
Hanover Branch	13	..
York and Wrightsville	13	..
Lancaster and Harrisburgh	37	..
DELAWARE.		
New-Castle and Frenchtown	16	..
Wilmington Branch	..	11
MARYLAND.		
Annapolis and Elkridge	21	..
Baltimore and Ohio	254	125
Washington Branch	21	..
Frederick Branch	3	..
Baltimore and Susquehanna	57	..
Westminster Branch	10	..

NAMES OF RAILWAYS.	Miles in operation.	Miles in construction.
VIRGINIA.		
Richmond and Danville	35	122
Richmond and Petersburg	22	..
Clover Hill	15	..
South Side	10	110
Manassas Gap	..	106
Petersburg and Roanoke	60	..
Seaboard and Roanoke	80	..
Appomattox	9	..
Winchester and Potomac	32	..
Virginia Central, including Blue Ridge Rail-road	98	75
Virginia and Tennessee	10	195
Orange and Alexandria, including branch to Warrenton, 10 miles	10	90
Richmond, Fred'sb. & Potomac	76	..
Greenville and Roanoke	21	..
Northwestern	..	120
NORTH CAROLINA.		
Gaston and Raleigh	87	..
*Wilmington and Manchester	..	162
Wilmington and Weldon	162	..
North Carolina Centre	..	223
SOUTH CAROLINA.		
South Carolina Railroad	241	..
Greenville and Columbia	54	111
Charlotte and South Carolina	45	65
King's Mountain	..	25
Laurens	..	31
Spartanburgh and Union	..	66
MISSISSIPPI.		
Raymond	7	..
St. Francisville and Woodville	28	..
Vicksburgh and Brandon	60	..
Mobile and Ohio	..	273
Memphis and Charleston	..	..
GEORGIA.		
Central	191	..
Georgia	175	..
Macon and Western	101	..
Western and Atlantic	140	..
South-Western	51	..
Rome Branch	17	..
Muscogee	..	71
Atlanta and Westpoint	40	47
Milledgeville	..	13
Eatonton and Milledgeville	..	22
Wilkes	..	18

* Part of this Line is in South Carolina.

NAMES OF RAILWAYS.	Miles in operation.	Miles in construction.
Athens Branch	39	..
Waynesboro'	..	53
ALABAMA.		
Montgomery and Westpoint	88	..
Mobile and Ohio	33	29¼
Alabama and Tennessee	..	160
Tuscumbia, Courtland & Decatur	44	..
Memphis and Charleston	..	..
LOUISIANA.		
Carrollton	6	..
Clinton and Port Hudson	24	..
Lake Pontchartrain	6	..
Mexican Gulf	27	..
TENNESSEE.		
Nashville and Chattanooga	70	89
East Tennessee and Georgia	42	68
East Tennessee and Virginia	..	130
*Memphis and Charleston	..	281½
Winchester and Huntsville	..	60
Mobile and Ohio	..	119½
KENTUCKY.		
Frankfort and Lexington	28	..
Louisville and Frankfort	65	..
Maysville and Lexington	..	70
Covington and Lexington	..	78
Lexington and Danville	..	37
Louisville and Nashville	..	180
Mobile and Ohio	..	39½
MISSOURI.		
Pacific	..	315
Hannibal and St. Joseph	..	200
OHIO.		
Cleveland and Columbus	135	..
Columbus and Lake Erie	61	..
Dayton and Springfield Branch	24	..
Findlay	16	..
Little Miami	84	..
Mad River	134	..
Sandusky and Mansfield	56	..
Xenia and Columbus	54	..
Bellefontaine and Indiana	..	113
Cincinnati and Marietta	..	188
Cleveland and Pittsburgh	98	..
Cleveland, Norwalk and Toledo	..	87
Clevel., Painesville & Ashtabula	..	71½
Columbus, Urbana and Piqua	..	93
Cinc., Wilmington & Zanesville	..	160
Cincinnati, Hamilton & Dayton	60	..
Dayton and Western	..	35½
Dayton and Xenia	..	15
Greenville and Miami	..	40
Hamilton and Eaton	..	36
Hillsboro'	..	37
Iron	..	50
Junction	..	110½
Ohio and Indiana	..	126
Ohio and Mississippi	..	20
Ohio and Pennsylvania	81	104
Ohio Central	25	125
Scioto and Hocking Valley	..	120
Steubenville and Indiana	..	121
Pittsburgh and Cincinnati	..	110
Dayton and Michigan	..	25
Eaton and Piqua	..	30
Hudson and Akron Branch	..	50
Franklin and Warren Branch	..	30
INDIANA.		
New-Albany and Salem (with Branch around Lake Michigan of 54 miles)	117	279
Jeffersonville	50	16
Madison and Indianapolis	86	..
Shelbyville Branch	16	..
Rushville Branch	20	..
Knightstown Branch	27	..
Lawrenceburgh & Indianapolis	..	90½
Indiana Central	..	71½
Richmond	..	4
New Castle and Richmond	..	27
Indianapolis and Bellefontaine	43	41
Peru and Indianapolis	23½	50
Lafayette and Indianapolis	..	68
Crawfordville	26	..
Terre Haute and Indianapolis	72	..
Evansville and Illinois	26	24
Martinsville Branch	..	29
Indiana Northern	100	35
Extens. of the Greenv. & Miami	..	10
Ohio and Mississippi	..	160
ILLINOIS.		
Illinois Central	..	699
Galena and Chicago	94	83
Rock Island and Chicago	..	180½
Central Military Tract	..	125
Peoria and Oquawka	..	100
Ohio and Mississippi	..	145
Northern Cross Road	..	54
Sangamon and Morgan	54	..

* This includes that part of the route which passes through the States of Mississipp and Alabama.

NAMES OF RAILWAYS.	Miles in operation.	Miles in construction.
Alton and Sangamon	..	72
Aurora Branch	13	..
St. Charles	7	..
O'Fallon's Coal Road	3	..
MICHIGAN.		
Central	228	..
Southern	133	..
Pontiac	25	..
Tecumseh Branch	8	..
Erie and Kalamazoo	33	..
WISCONSIN.		
Milwaukee and Mississippi	20	180
Fond duLac & Rock Island Valley	.	241
TEXAS.		
Buffalo, Bayou and Brazos	..	32

Total number of miles in operation and in course of construction in the U. S.

	Miles in operation.	Miles in progress.	Total.
Maine	315	128	442
New-Hampshire	489½	47	536½
Vermont	380	59	439
Massachusetts	1089	67	1156
Rhode Island	50	32	82
Connecticut	547	261	808
Total in N. E.	2870½	593	3463½
New-York	1826	744	2571
New-Jersey	226	111	337
Pennsylvania	1146	774	1920
Delaware	16	11	27
Maryland	376	125	501
Virginia	478	818	1296
North Carolina	249	385	634
South Carolina	340	298	638
Georgia	754	229	983
Alabama	121	189½	310½
Mississippi	93	273	366
Louisiana	63	—	63
Texas	—	32	32
Tennessee	112	748	860
Kentucky	93	404½	497
Ohio	828	1892½	2720½
Michigan	427	—	427
Indiana	600	905	1505
Illinois	176	1463	1639
Missouri	—	515	515
Wisconsin	20	421	441
Total in Middle, W. & S. States,	10,814½	10878½	21693

2.—INFLUENCE OF RAIL-ROADS.

Sir,—The influence which rail-roads exert in promoting the business of cities, extending their intercourse, and raising the value of the property within and around them, has become so marked in its results, and the prosperity depending upon them so palpable, that it would seem to be surplusage to attempt to demonstrate it. In attempting it, the mere affluence of facts which present themselves, offers the first difficulty to be encountered. He who for a moment reflects upon the nature of industry, the necessity of traffic and the modes of conducting it, perceives at once, that the time and labor employed in the transportation are the greatest difficulties encountered by the productive worker. The larger the cost of interchanging any two articles, the less of each will the producers have to consume for themselves. Inasmuch as that the articles required for consumption are the only incentives to production, (and there can be no wealth without production,) every thing which tends to enhance the quantities of commodities obtained in exchange of any result of industry, directly encourages production and advances the general wealth. Prompt and cheap transportation is the most effective agent in this view. Hence we find in all sections where rail-roads have been most freely used, that the general wealth increases far more rapidly through the operation of rail-roads, than is absorbed in the construction. This result of rail-road operation—so entirely different from what selfish prejudices formerly predicted from them—has effectually removed most of the rivalry of even opposing lines, because each finds, in the business evolved by the other, an enhancement of its own property.

When rail-roads, now something more than twenty years since, were first sought to be generally introduced in England, they were very bitterly opposed by large classes, on the ground, that an immense amount of human industry connected with land carriages would be thrown out of employment, and a vast number of horses rendered useless. The facts here demolish the fallacy. Where rail-roads most freely abound, labor of both men and horses is most in demand, and, consequently, trade most active and property most valuable. Perhaps the best illustration of this tendency is in New-England. It is known that the soil of those six states is very sterile in its nature, and but illy rewards the labor of the farmer; nevertheless, where the Hudson River on the west bounded the accessible portions of western lands, the agriculture of New-England flourished. On the opening of the Erie canal, all the prolific lands of western New-York became, by cheapened transportation, as accessible to Boston as had before been the lands of western Massachusetts. A change in the industry of New-England resulted. The farmers migrated to the new lands of the west, and those who remained turned their attention more to manufacturing industry, but with limited means, because internal transportation was wanting in New-England.

The opening of the northern New-York line of rail-roads, with the increased steam navigation of the lakes, gave a further impetus to migration from New-England in the ten years ending with 1840. With the commencement of the decade ending with 1850, rail-roads began to multiply, and their effects have been marvelous. Notwithstanding the vast increase in the population of the western states, the activity imparted to industry in New-England, by the operation of rail-roads, has been such as to keep her people at home; and while their numbers have increased in a ratio greater than before, the valuation of property, *per head*, has *increased* fifty per cent. To illustrate, we will omit the state of Maine, where there were comparatively no rail-roads, and where there has been a consequent decrease of proportionate increase. The population of the new North-western states as compared with the New-England states, omitting Maine, has been as follows:

	1830.	INCREASE. Per cent.	1840.	INCREASE. Per cent.	1850.	INCREASE. Per cent.
New-England	1,555,262	15	1,733,029	11	2,144,918	24
N. Western	1,470,018	85	2,967,840	102	4,721,430	59

An immense change in the New-England population is apparent; and if we analyze it, we shall find the causes of the change more apparent. Thus, in the five states of New-England there is one mile of rail-road to every eleven miles of surface; and, in the three states, Massachusetts, Rhode Island and Connecticut, where the greatest increase in population has taken place, there is one mile of rail-road to every seven and a half of surface. But the focus of all the increase has been the four counties of Massachusetts, including Boston. These counties have one mile of rail-road to every four miles of surface, while in England and Wales there is but one mile of rail-road to every ten miles of surface. The population of these four counties has advanced forty-seven per cent. in the last ten years, and their taxable wealth, as compared with the rest of Massachusetts, is as follows:

	FOUR COUNTIES. Population.	Valuation.	REST OF STATE. Population.	Valuation.
1840	350,511	194,228,813	368,081	105,650,516
1850	516,212	399,637,047	505,632	190,894,834
Increase	265,701	$205,408,234	237,581	$85,244,318

This is a result which may well gratify the friends of rail-road enterprise, and induce all interests to regard in them the agent of general prosperity.

We may now take Boston alone for these periods, viz: 1840, 1845, 1850, showing the miles of rail-road open in Massachusetts at each period, the population of Boston, and the value of real and personal estate in the city.

	1840.	1845.	1850.
Population	98,383	$114,366	138,788
Real estate	$60,424,200	$81,991,400	$105,093,400
Personal estate	34,157,200	53,957,300	74,907,100
Personal estate, per head,	350	470	610
Miles rail-road open	241	512	1,130

Thus, while the numbers of the people have risen more than forty per cent., the personal property, per head, has nearly doubled.

If we now take Worcester, the county where many of the rail-roads coming from Albany, New-Haven, Norwich, Providence, Nashua and Vermont, from every point of the compass meet and form connections for the prompt and speedy transition of freight and passengers, without delay or expense, to Boston—if they wish to go there—we find results not the less satisfactory.

Worcester.	Population.	Valuation.	Per head.
1840	95,313	$29,804,316	$310
1850	130,789	55,497,793	420

Now, if we look at Barnstable county, in which there are no rail-roads, we find the population increased from 32,500 to 35,276, or seven per cent. only, and the valuation is $250 per head! or, about one-half that of the inland rail-road county. What now results from these facts? Why, the rail-roads of Massachusetts have cost $50,000,000, and the wealth of the state has increased $300,000,000, or, six times the amount in ten years. That is to say, from the landing at Plymouth to 1840, two hundred years elapsed, in which time the wealth of Massachusetts reached $299,878,327. Ten years of rail-roads have added a sum equal to the whole results of those two hundred years. Is not that a *rail-road pace?* The general lesson was not lost on so shrewd a people, viz: that the greater the facility, the more general business was profitable. Whatever impedes facility of transportation injures all interests. This became an axiom, and all the rivalry of rail-roads, as well as the petty prejudices which would impede their action, disappeared. Thus, from every point of the compass, rail-roads enter Boston, but none pass *into it* for lack of room. Thus, the outskirts, of the city are dotted with depots like a circle of fortresses, and the transportation from one to the other is across the city by carts, and is expensive and tedious, although it employs numbers of men and horses. To remedy that, a "junction rail-road" encircles the city from depot to depot, in order that the trains coming from Maine on the north, may deliver freight to the trains for the south. It is a facility which the general interest demanded. It is one detailed system which experience compelled all the rail-roads of England to adopt, viz: a perfect connection of all their business. Thus, there are forty-five companies having eight hundred and eighty-seven stations; *at any one of these stations traffic may be booked for any other.* There are, therefore, four thousand places in the circle of operation perfectly connected, and the traffic on all is so regulated by tickets and accounts, that each company receives its full pay for the work done on its line, whether for passengers or goods, and the final settlement is made in London, and is done without error, although in order to facilitate transportation, the cars of one company run upon the rails of another when necessary. This singularly ingenious system was the result of the want of the most perfect connection so imperiously felt by the community at large.

The effects of rail-road influence, so marked in the official returns of Massachusetts, are equally manifest in other localities. The Erie Rail-road of New-York has been in operation but fifty-three miles until within the last ten years, yet its influence upon population is as follows:

POPULATION OF NEW-YORK.

	1840.	1850.	Inc. per cent.
New-York city and Brooklyn	360,546	654,293	80
Rail-road counties	329,545	415,018	26
Canal "	674,412	797,119	18½
North River "	468,353	541,764	16
Other "	596,694	691,055	16
Total state	2,429,550	3,099,249	

The county of Rockland, which terminates the road on the North River, has increased in the greatest proportion, but that road is now just beginning to produce its influence upon the interior counties. Its effect upon the city has long been felt in the supplies of fresh provisions which its furnishes. A few items may be taken, as follows:

DELIVERED BY THE ERIE RAIL-ROAD.

	Milk, quarts.	Butter, lbs.	Sheep and Lambs, lbs.	Poultry, lbs.
1845	6,227,288	3,562,150	809,870	150
1846	7,090,384	3,678,440	749,390	950
1849	9,480,576	5,126,423	2,044,703	2,150
1851	12,474,172	13,241,750	7,741,520	2,653,432

It is by this means that the distant lands, before inaccessible, are now brought to the supply of fresh daily food for the citizens, and a year's savings in the cost, to say nothing of qualities, would *build the road*. The lands through which the road runs being thus productive, causes a demand for large supplies of goods from the city in return, and the materials for manufacturers also become available.

As we follow the progress of rail-roads in the Western states, similar results appear.

Thus, from Chicago, in Ill., the rail-road runs northwest to Galena, through thirteen counties of the state. That is a purely agricultural district, and it labors under the disadvantage of having to contend, in the sale of its produce, with the older states nearer to the market; nevertheless, the progress of the counties has been as follows:

	1840.	1850.	Increase.
Population	46,992	163,417	116,425
Valuation	$3,630,040	$21,942,239	$17,312,179
" per head	$77.25	$134.27	$51

The increase of population for this portion of the state has been 279 per cent. In the eleven counties through which the canal runs, 109 per cent.; and in the remaining seventy-five counties of the state, 53 per cent. only.

This influence of locomotion upon general and local property is so great, and has been in so many localities so fully developed, as to be universally recognized, North and West, and it promotes, in a continually increasing ratio, the disposition to invest funds in such undertakings.

It will be observed, that the objects to be attained by rail-road connections are the straight communication between given points, the prompt delivery, and at the smallest cost. Those roads which attain these objects take all the business, and are above competition. Where the chain of communication on any route is broken by faulty connections, the expense and delay attending such a state of affairs, is a direct premium for the establishment of rival routes. This small pandering to insignificant interests was, at first, a drawback in Massachusetts upon the success of undertakings, but very soon all came to understand that the completeness of communication, as far as it could by any possibility be perfected, was the true interest of all parties. It is by that the general interest is subserved, and consequently, although some of minor importance may change the direction of their energies, they benefit ultimately in the common prosperity.

Yours, very truly,

THOMAS P. KETTELL.

3.—AMERICAN RAIL-ROADS.

The Superintendent of the Census, J. C. G. Kennedy, Esq., having, at the request of the French Department of Public Works, and at very considerable labor, prepared the subjoined able and comprehensive statistical view of the extent of American rail-roads, as well as those in course of construction as those contemplated and in operation, he has kindly permitted us, says the National Intelligencer, to take a copy of it for publication:

CENSUS OFFICE, Washington, March 1, 1852.

In compliance with your request, I proceed to answer your inquiries concerning rail-roads in the United States.

The number of miles of rail-roads in operation in the United States, January 1st, 1852, was, as nearly as can be ascertained, 10,814¼. At the same time

there was in course of construction an extent of rail-road amounting, according to the most reliable estimates, to 10,898½ miles. By far the greater portion of the lines commenced, but now incomplete, will be finished within the ensuing five years. The length of rail-road brought into operation since January 1, 1848, is 5,224 miles. Within the last year 2,153 miles have been finished. Nearly all the lines in progress have been commenced since 1848. It is supposed that from one thousand to fifteen hundred miles, additional, to the 10,898 now known to be in progress, will be put under contract during 1852.

There never existed greater activity in the making of rail-roads in the United States than at the present time. Many of the lines projected have taken the place of plans for the construction of canals and turnpike roads. Accordingly, these works of public improvement are not prosecuted with the same ardor and energy as formerly, although much activity exists in the construction of plank roads. The labor and capital which they would require are absorbed in the numerous and almost colossal rail-roads building. Since 1848, the extent of rail-road opened for travel and transportation has nearly doubled, and there is reason to believe that the increase in the length of road brought into use will not be less rapid during the next period of four years. By the year 1860 we may expect that the territory of the United States will be traversed by at least 30,000 miles of rail-road.

It is very difficult to form an estimate of the average expense per mile of building rail-roads in the United States. In fact no average can be assumed as applicable to the whole country. The cost of the roads in New-England is about $45,000 per mile; in New-York, Pennsylvania and Maryland, about $40-000. But in the interior of these states the surface of the country is broken, rendering the cost of grading very heavy; and nearer the sea, wide and deep streams interrupt the lines of travel, and make the expense of bridging a serious item.

In New-England, and the more densely inhabited parts of the old states, from the Atlantic, as in all European countries, the extinguishment of private titles to the real estate required for rail-roads, frequently forms a large part of the expenses included in the item of construction. In the southern states, and the valley of the Mississippi, $20,000 per mile is considered a safe estimate. There, in most cases, all the lands necessary for the purposes of the companies are given to them in consideration of the advantages which private proprietors expect from the location of the roads in the vicinity of their estates.

In many of the western states the cost of grading a long line of road does not exceed $1,000 per mile—the cost of the timber amounting to nothing more than the expense of clearing it from the track. For these reasons the expense of building rail-roads in the southern and western states is now much less than it will be when the country becomes as densely settled as the older states of the Union.

The Central Rail-Road of Illinois is an enterprise which furnishes a remarkable example of the energy and spirit of improvement in the new states. Illinois was admitted into the confederation as a state in 1818, with 30,000 inhabitants. It has 55,405 square miles of territory, and a population, according to the census of 1850, of 851,470. The Central Rail-road is to extend from its southwestern extremity, at the confluence of the Mississippi and Ohio rivers, to the north line of the state, with two diverging branches. The total length of this road, including the main stem and branches, is to be six hundred and eighty miles. The cost is estimated at $20,000 per mile, or $10,000,000 for the entire work, without equipments for operating it. This is the longest continuous line of road now in contemplation in the United States, of which there is any probability of speedy completion. It has been commenced with such facilities for executing the plans of its projectors, that there is no reasonable doubt that it will be finished within a few years.

Mr. Asa Whitney proposes to construct a rail-road from St. Louis, or some other place on the Mississippi River, to the Pacific Ocean, terminating either at San Francisco, in California, or at the mouth of the Columbia River, in Oregon. He solicits the patronage of the National Government for this prodigious work,

and petitions for the grant of land equal in extent to sixty miles in width to two thousand miles in length. His plans were first laid before Congress in 1842, and he has since been continually occupied in recommending them to the favorable attention of the government and the people with great ability and zeal; but with what success remains yet to be seen. Without expressing any view with reference thereto, it may be said that his project is generally considered impracticable, from the fact that of the two thousand miles of territory which his route across the territory must traverse, a large portion consists of desert or of sterile and very elevated mountain districts, in which can be found no materials of construction, and which would afford no business for the support of the road, were the difficulties of building it overcome. Many intelligent men, however, are convinced of its practicability and expediency.

The rail-road system of the United States may be considered to have commenced in 1830. The first one put in operation was a short road built for transportation of ice from a small lake to the sea, in the state of Massachusetts. The length of this work was four miles. It was finished in 1830. In the same year the state of South Carolina caused to be commenced a rail-road from Charleston, its principal port, to Augusta, in Georgia. The distance is 135 miles. The work was finished in 1833, at the very remarkably small cost of $1,336,615, which sum included also the expenses of furnishing the road with engines and passenger and freight cars, and all other necessary equipments. This was the first road of any considerable length constructed in the United States, and it is believed to have been the cheapest and one of the most successful.

The longest continuous line of rail-road in the world, and that in the construction of which the greatest natural obstacles have been overcome, is that which extends from the Hudson River, through the southern counties of New-York, to Lake Erie. Its length is four hundred and sixty-nine miles, and it has branches of an aggregate additional length of sixty-eight miles. Nearly its whole course is through a region of mountains. The bridges by which it is carried over the Delaware and Susquehanna rivers and other streams, and the viaducts upon which it crosses the valleys that intercept its route, are among the noblest monuments of power and skill to be found in our country. The most of these works are of heavy masonry, but one of them is a wooden bridge, one hundred and eighty-four feet in height, and having but one arch, the span of which is two hundred and seventy-five feet. One of the viaducts is 1,200 feet long, and 110 feet high. The aggregate cost of this important work was $23,580,000, and the expense of construction was $43,393 per mile. The road was originally suggested in 1829; a company was organized in 1832; surveys were made in the same year, and operations were begun by grading a part of the route in 1833. It was finished in May, 1851, and opened with great ceremony for travel and transportation in that month. The state advanced six millions of dollars towards the work, and afterwards released the company from the obligation to pay the loan. It will thus be seen that the execution of this great improvement was pursued through nineteen years, and it was not accomplished without calling into requisition both the resources of the state and the means of her citizens.

In the infancy of the American rail-road system, and for ten years thereafter, it was the rule to extend to every important enterprise of that character the assistance of the state in which it was to be built.

Pennsylvania, Michigan, Illinois, Mississippi, and some other states, adopted extensive systems of improvements, consisting of rail-roads and canals, which they pursued until their credit failed; an event which happened in most cases before any of the works had been completed and brought into profitable use. But the general practice was to charter companies, each of which was charged with the execution of some particular work, and to aid them by loans of state stocks. Although this practice has fallen into so much disfavor in some of the states that the citizens have incorporated in their constitutions articles prohibiting advances by their legislatures for such purposes, it is yet continued by others, and Virginia, Tennessee and other states are now prosecuting expensive works, considered essential to their prosperity, by means of advances from their respective treasuries.

In the year 1850, Congress passed an act, after a very protracted discussion, granting to the State of Illinois about 2,700,000 acres of public lands to aid in the construction of the Central Rail-Road, to which allusion has been before made. This magnificent donation is reckoned by the company to which Illinois has confided the building of the road, to be worth $18,000,000. This was the first instance in which the aid of the National Government had been extended to a rail-road project.

But since the above grant, innumerable applications have been made from all the new states for cessions of land for rail-road purposes. Whether such further aid shall be extended, is now a much-agitated question in American politics. Bills are pending in Congress proposing to cede for these purposes about 20,000,000 acres.

The following table presents, in a convenient form, some of the principal facts connected with rail-roads in the United States on the first of January, 1852:

States with Rail-roads in operation or in process of construction.	Miles of Rail-road completed and in operation.	Miles of Rail-road in course of construction.	Area of the States in square miles.	Population in 1850.	No. inhabitants to the square mile.
Maine	315	127	30,000	583,188	19,44
N. Hampshire	489	47	9,280	317,964	34,26
Vermont	380	59	10,312	314,120	30,76
Massachusetts	1,089	67	7,800	994,499	127,49
Rhode Island	50	32	1,306	147,544	112,97
Connecticut	547	261	4,674	370,791	79,33
New-York	1,826	745	46,000	3,097,394	67,33
New-Jersey	226	111	8,320	489,555	58,84
Pennsylvania	1,146	774	46,000	2,311,786	50,25
Delaware	16	11	2,120	91,535	43,17
Maryland	376	125	9,356	583,035	62,31
Virginia	478	818	61,352	1,421,661	23,17
North Carolina	249	385	45,000	868,903	19,30
South Carolina	340	298	24,500	668,507	27,28
Georgia	754	129	58,000	905,999	15,62
Alabama	121	190	50,722	771,671	15,21
Mississippi	93	273	47,156	606,555	12,86
Louisiana	63	—	46,431	517,739	11,15
Texas	—	32	237,321	212,592	89
Tennessee	112	748	45,600	1,002,625	21,98
Kentucky	93	414	37,680	982,405	26,07
Ohio	828	1,892	39,964	1,980,408	49,55
Michigan	497	—	56,243	397,654	7,07
Indiana	600	915	33,809	988,416	29,23
Illinois	176	1,409	55,405	851,470	15,36
Missouri	—	515	67,380	682,043	10,12
Wisconsin	20	421	53,924	305,191	5,65
	10,814	10,898			

Nearly parallel to the Atlantic coast of the United States, from Maine to Alabama, runs the range of mountains known as the Alleghany or Appalachian chain. The eastern bases of these mountains are not distant from the seaboard more than a hundred miles, and they form a very formidable obstacle to the construction of rail-roads between the great eastern cities and the interior. In nearly all the great enterprises which have been undertaken with the view to effect such connection, great additional expense has been incurred to overcome or to penetrate this mountain barrier. In the plan first adopted for the general system of state improvements in Pennsylvania, it was proposed to effect the crossing of the Alleghanies by means of inclined planes, with powerful stationary engines at their summits. The planes were built, and have been used for several years, until experience proved their operation was too slow and too

expensive to maintain a successful competition with other methods of conveyance, and other improvements have since been furnished designed to supersede them. The rail-road from Baltimore to the Ohio River is carried over a passage in these mountains where the elevation is upwards of three thousand feet, and a part of that height is overcome by tunnels, varying in length from one-sixteenth to four-fifths of a mile. The road from New-York to Albany, along the banks of the Hudson, has three tunnels. The greatest work of this kind yet proposed in the United States is the tunnel through the Hoosack mountain, which, if executed, will be four miles in length, and fifteen hundred feet below the summit of the ascent. The cost is estimated at $2,000,000. On the road from New-York to Lake Erie, tunnels have been avoided by expensive works, which overcome ascents of 1,400 feet.

No authentic statement has ever been given of the capital invested in the rail-roads of the United States, but we have the means of forming an estimate upon which much reliance may be placed. The rail-roads in operation at the beginning of the present year, may be assumed to have cost $348,000,000. The amount invested in the lines under construction, it is impossible to estimate with even an approximation to correctness. Their cost, when completed, will be considerably less than that of an equal length of road now in operation: for the reason that the greater number of new or unfinished lines are in the West or South, where, as has been shown, the cost of construction is far below what it is in the northern and eastern states.

The management of the American rail-roads is entirely distinct from the administration of government. Their concerns are managed by corporations, which consist of a President, Secretary, and Directors. Each of the Directors must own a certain amount of stock. They are chosen by the body of stockholders, who have votes in proportion to the number of shares they hold. The Directors choose one of their body President, and appoint the Secretary. The President and Secretary have generally liberal salaries, but the services of the Directors are gratuitous.

The rate of the speed on our rail-roads is not so great as on those of England. The ordinary velocity of a passenger train is twenty miles an hour, but on some routes it is as high as twenty-eight and thirty miles. Express trains, on such occasions as the conveyance of the President's message, frequently maintain for a long distance as high a speed as forty-five miles an hour. And one road, that between New-York and Albany, forty-five miles per hour is the regular rate for all passenger trains.

The fares or rates of passage are not uniform. In New-England, the average price per mile for the conveyance of passengers is under two cents; from New-York to Boston, it is two and four-tenths; from New-York to Philadelphia, three and four-tenths; from Philadelphia to Baltimore, three and one-tenth. From New-York to Cincinnati the distance is 857 miles by the northern route, of which 143 miles are traveled by steamboat. The price of passage for the whole distance is $15 50, being slightly under two cents per mile. The lines between Baltimore and Cincinnati, soon to be opened, will be 650 miles in length, and the fare will be $13; that is, two cents per mile.

Believing that the history of the origin, condition, and extent of the rail-roads in the United States form one of the most important subjects of statistical investigation, and one not generally understood, I have devoted a portion of my time to the preparation of a complete history and detailed statement respecting each of the rail-roads in the United States, to accompany the other statistics to be embraced within the seventh census; but, as Congress may exercise their right of abridging the work on this and other subjects, it is impossible, in advance, to say what the census, when published, will contain. I inclose to you herewith a copy of the census of Maryland, prepared in advance, for reasons which will appear in its "preface."

I have the honor to be, sir, with great respect,

Your most obedient servant

JNO. C. G. KENNEDY.

JULES CARTIN, *Minister Public Works, Paris.*

MISCELLANEOUS.

1.—CENSUS STATISTICS U. S., 1850—PROGRESS OF POPULATION AND INDUSTRY, ETC—COMPARATIVE TABLES.

FROM the able Census Report of Mr. Kennedy, we extract the following, and shall continue our extracts as his labors progress:

The seventh enumeration of the inhabitants of the United States exhibits results which every citizen of the country may contemplate with gratification and pride. Since the census of 1840, there have been added to the territory of the republic, by annexation, conquest, and purchase, 824,969 square miles; and our title to a region covering 341,463 square miles, which before properly belonged to us, but was claimed and partially occupied by a foreign power, has been established by negotiation, and it has been brought within our acknowledged boundaries. By such means the area of the United States has been extended, during the past ten years, from 2,055,163 to 3,221,595 square miles, without including the great lakes which lie upon our northern border, or the bays which indent our Atlantic and Pacific shores; all which has come within the scope of the seventh census.

In the endeavor to ascertain the progress of our population since 1840, it will be proper to deduct from the aggregate number of inhabitants shown by the present census, the population of Texas in 1840, and the number embraced within the limits of California and the new Territories, at the time of their acquisition. From the best information which has come to hand, it is believed that Texas contained, in 1840, 75,000 inhabitants; and that when California, New-Mexico, and Oregon, came into our possession, in 1846, they had a population of 97,000. It thus appears that we have received, by accessions of territory, since 1840, an accession of 172,000 to the number of our people.

The increase which has taken place in those extended regions, since they came under the authority of our government, should obviously be reckoned as a part of the development and progress of our population; nor is it necessary to complicate the comparison by taking into account the probable natural increase of this acquired population, because we have not the means of determining the rate of its advancement, nor the law which governed its progress, while yet beyond the influence of our political system. The year 1840, rather than the date of the annexation of Texas, has been taken for estimating her population, in connection with that of the Union, because it may safely be assumed that, whatever the increase during the five intervening years may have been, it was mainly, if not altogether, derived from the United States.

Owing to delays and difficulties mentioned in completing the work, which no action on the part of this office could obviate, some of the returns from California have not yet been received. Assuming the population of California to be 165,000, (which we do partly by estimate,) and omitting that of Utah,* estimated at 12,000, the total number of inhabitants in the United States was, on the 1st of June, 1850, 23,946,301. The absolute increase from the 1st of June, 1840, has been 6,176,848, and the actual increase per cent. is 36.18. But it has been shown that the probable amount of population acquired by additions of territory should be deducted in making a comparison between the results of the present and the last census. These reductions diminish the total population of the country, as a basis of comparison, to 23,074,301, and the increase to 6,004,848. The relative increase, after this allowance, is found to be 35.17 per cent. The aggregate number of whites in 1850 was 19,619,366, exhibiting a gain upon the number of the same class in 1840 of 5,423,371, and a relative increase of 38.20 per cent. But excluding the 153,000 free population supposed to have been acquired by the addition of territory since 1840, the gain is 5,270,371, and the increase per cent. is 37.14.

The number of slaves, by the present census, is 3,198,298, which shows an increase of 711,085, equal to 28.58 per cent. If we deduct 19,000 for the probable slave population of Texas in 1840, the result of the comparison will be slightly different. The absolute increase will be 692,085, and the rate per cent. 27.83.

The number of free colored in 1850, was 428,637; in 1840, 386,245. The increase of this class has been 43,392, or 10.95 per cent.

From 1830 to 1840, the increase of the whole population was at the rate of 32.67 per cent. At the same rate of advancement, the absolute gain for the ten years last past would have been 5,578,333, or 426,515 less than it has been, without including the increase consequent upon additions of territory.

The aggregate increase of population, from all sources, shows a relative advance greater than that of any other decennial term, except that from the second to the third census, during which time the country received an accession of inhabitants, by the purchase of Louisiana, considerably greater than 1 per cent. of the whole number. Rejecting from the census of 1810, 1.45 per cent., for the population of Louisiana, and from the census of 1850, one per cent. for that of Texas, California, &c., the result is in favor of the last ten years by about one-fourteenth of one per cent.; the gain from 1800 to 1810 being

* Since ascertained to be 11,381.

35.05 per cent.; and from 1840 to 1850, 35.12 per cent. But, without going behind the sum of the returns, it appears that the increase from the second to the third census was thirty-two hundredths of one per cent. greater than the increase from the sixth to the seventh.

The decennial increase of the most favored portions of Europe is less than 1¼ per cent. per annum, while with the United States it is at the rate of 3½ per cent. According to our past progress, viewed in connection with that of European nations, the population of the United States in forty years will exceed that of England, France, Spain, Portugal, Sweden, and Switzerland, combined.

The relative progress of the several races and classes of the population is shown in the following tabular statement:

Increase per cent. of each class of Inhabitants in the United States for sixty years.

Classes.	1790 to 1800.	1800 to 1810.	1810 to 1820.	1820 to 1830.	1830 to 1840.	1840 to 1850.
Whites	35.7	36.2	34.19	33.95	34.7	38.28
Free colored	82.2	72.2	25.25	36.85	20.9	10.9
Slaves	27.9	33.4	29.1	39.61	23.8	24.58
Total colored	32.2	37.6	28.58	31.44	23.4	26.22
Total population	35.01	36.45	33.12	33.48	32.6	36.25

The census had been taken previously to 1830, on the 1st of August; the enumeration began that year on the 1st of June, two months earlier, so that the interval between the fourth and fifth censuses was two months less than ten years, which time allowed for, would bring the total increase up to the rate of 34.36 per cent.

The table given below shows the increase from 1790 to 1850, without reference to intervening periods:

No. of—	1790.	1850.	Absolute increase in sixty years.	Increase per cent. in sixty years.
Whites	3,172,464	19,638,019	16,457,555	527.97
Free colored	59,466	428,637	369,171	617.44
Slaves	697,897	3,184,262	2,486,365	350.13
Total free colored and slaves	757,363	3,612,899	2,855,536	377.00
Total population	3,929,827	23,246,301	19,316,444	491.52

Sixty years since, the proportion between the whites and blacks, bond and free, was 4.2 to 1. In 1850, it was 5.26 to 1, and the ratio in favor of the former race is increasing. Had the blacks increased as fast as the whites during these sixty years, their number, on the first June, would have been 4,657,239; so that, in comparison with the whites, they have lost, in this period, 1,035,340.

This disparity is much more than accounted for by European emigration to the United States. Dr. Chickering, in an essay upon emigration, published at Boston in 1848—distinguished for great elaborateness of research—estimates the gain of the white population, from this source, at 3,922,152. No reliable record was kept of the number of emigrants into the United States until 1820, when, by the law of March, 1819, the collectors were required to make quarterly returns of foreign passengers arriving in their districts. For the first ten years, the returns under the law afford materials for only an approximation to a true state of the facts involved in this inquiry.

Dr. Chickering assumes, as a result of his investigations, that of the 6,431,088 inhabitants of the United States in 1820, 1,430,906 were foreigners, arriving subsequent to 1790, or the descendants of such. According to Dr. Seybert, an earlier writer upon statistics, the number of foreign passengers, from 1790 to 1810, was, as nearly as could be ascertained, 120,000; and from the estimates of Dr. Seybert, and other evidence, Hon. George Tucker, author of a valuable work on the census of 1840, supposes the number from 1810 to 1820, to have been 114,000. These estimates make, for the thirty years preceding 1820, 234,000.

If we reckon the increase of these emigrants at the average rate of the whole body of white population during these three decades, they and their descendants, in 1820, would amount to about 360,000. From 1820 to 1830, there arrived, according to the returns of the custom-houses, 135,986 foreign passengers, and from 1830 to 1840, 579,370, making for the twenty years 715,356. During this period, a large number of emigrants from England, Scotland and Ireland came into the United States through Canada. Dr. Chickering estimates the number of such from 1820 to 1830, at 67,993; and from 1830 to 1840, at 199,130—for the twenty years together, 267,123. During the same time, a considerable number are supposed to have landed at New-York with the purpose of pursuing their route to Canada; but it is probable that the number of these was balanced by the omissions in the official returns.

From 1840 to 1850, the arrivals of foreign passengers, in the ports of the United States, have been as follows:

1840–'41	83,504	1847	234,756
1842	101,107	1848	226,524
1843	75,159	1849	269,610
1844	74,607	1850†	173,011
1845	102,415		
1846*	202,157	Total	1,542,850

Within the last ten years there has probably been comparatively little immigration foreigners into the United States over the Canada frontier; the disposition to take the route by Quebec having yielded to the increased facilities for direct passenger transportation to the cities of the Union; what there has been may, perhaps, be considered as equaled by the number of foreigners passing into Canada, after landing at New-York, many having been drawn thither by the opportunities of employment afforded by the public works of the province. As the heaviest portion of this great influx of emigration took place in the latter half of the decade, it will probably be fair to estimate the natural increase during the term, at twelve per cent., being about one third of that of the white population of the country at its commencement.

Taking for granted the substantial correctness of the above estimates, and the accuracy of the returns during the last ten years, the following statement will show the accessions to our population from emigration from 1790 to 1850:

Number of foreigners arriving from 1790 to 1810	120,000
Natural increase, reckoned in periods of ten years	47,560
Number of foreigners arriving from 1810 to 1820	114,000
Increase of the above to 1820	19,000
Increase from 1810 to 1820 of those arriving previous to 1810	58,450
Total number of emigrants and descendants of immigrants in 1820	359,010
Number of immigrants arriving from 1820 to 1830	203,979
Increase of the above	35,728
Increase from 1820 to 1830 of immigrants and descendants of immigrants in the country in 1820	134,130
Total number of immigrants and descendants of immigrants in the United States in 1830	732,847
Number of immigrants arriving from 1830 to 1840	778,500
Increase of the above	135,150
Increase from 1830 to 1840 of immigrants and descendants of immigrants in the United States in 1830	254,445
Total number of immigrants and descendants of immigrants in the United States in 1840	1,900,942
Number of immigrants arriving from 1840 to 1850	1,542,850
Increase of the above at twelve per cent.	185,142
Increase from 1840 to 1850 of immigrants and descendants of immigrants in the United States in 1840	722,000
Total number of immigrants into the United States since 1790, and their descendants in 1850	4,350,934

The density of population is a branch of the subject which naturally attracts the attention of the inquirer. The following table has been prepared from the most authentic data accessible to this office:

Table of the Area and the number of Inhabitants to the square mile in each State and Territory in the Union.

State.	Area in square miles.	Population in 1850.	No. of inhabitants to sq. m.	State.	Area in square miles.	Population in 1850.	No. of inhabitants to sq. m.
Maine	30,000	583,188	19.44	Kentucky	37,680	982,405	26.07
New-Hampshire	9,280	317,964	34.26	Tennessee	45,600	1,002,625	21.98
Vermont	10,212	313,611	30.07	Missouri	67,380	682,043	10.12
Massachusetts	7,800	994,499	126.11	Arkansas	52,198	209,639	4.01
Rhode Island	1,306	147,544	108.05	Ohio	39,964	1,980,408	49.55
Connecticut	4,674	370,791	79.83	Indiana	33,809	988,416	29.23
New-York	46,000	3,097,394	67.66	Illinois	55,405	851,470	15.37
New-Jersey	8,320	489,555	60.04	Michigan	56,243	397,654	7.07
Pennsylvania	46,000	2,311,786	50 25	Iowa	50,914	192,214	3.77
Delaware	2,120	91,535	43.64	Wisconsin	53,924	305,191	5.65
Maryland	9,356	583,035	62.31	California	188,982	-	-
Virginia	61,352	1,421,661	23.17	Minnesota	83,000	6,077	.07
North Carolina	45,000	868,903	19.30	Oregon	341,463	13,293	.03
South Carolina	24,500	668,507	27.28	New-Mexico	219,774	61,505	.28
Georgia	58,000	905,999	15.68	Utah	187,923	11,361	-
Alabama	50,722	771,671	15.21	Nebraska	136,700	-	-
Mississippi	47,156	606,555	12.86	Indian	187,171	-	-
Louisiana	46,431	511,974	11.02	North West	587,564	-	-
Texas	237,321	212,592	.89	District of Columbia	60	51,687	861.45
Florida	59,268	87,401	1.47				

* This return includes fifteen months, from July 1, 1845, to 30th September, 1846.

† The report from the State Department for this year, gives 315,333, as the total number of passengers arriving in the United States; but of these, 30,023 were citizens of the Atlantic States proceeding to California by sea, and 5,330 natives of the country returning from visits abroad. A deduction of 106,879 is made from the balance, for that portion of the year from June 1 to September 30.

From the location, climate, and productions, and the habits and pursuits of their inhabitants, the states of the Union may be properly arranged into the following groups: [For table, see below.]

There are points of agreement in the general characteristics of the states combined in the following groups, which warrant the mode of arrangement adopted. Maryland is classed, as heretofore, with the middle states, because its leading interests appear to connect it rather with the commercial and manufacturing section to which it is here assigned, than with the purely agricultural states. Ohio is placed in the same connection for nearly similar reasons.

There seems to be a marked propriety for setting off the new agricultural states of the north-west by themselves, as a preliminary to the comparison of their progress with other portions of the Union. The occupations which give employment to the people of the central range of states south of the line of the Potomac, distinguish them to some extent from that division to which we have given the appellation of the coast planting states. In the latter, cotton, sugar, and rice are the great staples, the cultivation of which is so absorbing as to stamp its impress on the character of the people. The industry of the central states is more diversified, the surface of the country is more broken, the modes of cultivation are different, and the minuter divisions of labor create more numerous and less accordant interests. So far as Texas is settled, its population closely assimilates with that of the other coast planting states; but it would obviously convey no well-founded idea of the density of population in that section to distribute their people over the vast uninhabited region of Texas. For the same reason, and the additional one of the isolation of her position, California is considered distinct from other states.

Taking the thirty-one states together, their area is 1,485,870 square miles, and the average number of their inhabitants is 15.48 to the square mile. The total area of the United States is 3,220,000 square miles, and the average density of population is 7.219 to the square mile.

The areas assigned to those states and territories in which public lands are situated, are doubtless correct, being taken from the records of the Land Office; but, as to those attributed to the older states, the same means of verifying their accuracy, or the want of it, do not exist. But care has been taken to consult the best local authorities for ascertaining the extent of surface in those states; and as the figures adopted are found to agree with, or differ but slightly from those assumed to be correct at the General Land Office, it is probable they do not vary essentially from the exact truth.

The area of some of the states, as Maryland and Virginia, are stated considerably below the commonly-assumed extent of their territory, which may be accounted for from the supposition that the portions of the surface within their exterior limits covered by large bodies of water, have been subtracted from the aggregate amount. This is known to be the case in regard to Maryland, the superficial extent of which, within the outlines of its boundaries, is 13,959 square miles; and is deemed probable with reference to Virginia, from the fact that many geographers have given its total area as high as 66,000 square miles.

It appears from the returns, that during the year ending on the first of June, 1850, there escaped from their owners one thousand and eleven slaves, and that during the same period fourteen hundred and sixty-seven were manumitted. The number of both classes will appear in the following table:

Manumitted and Fugitive Slaves—1850.

	Manumitted.	Fugitives.		Manumitted.	Fugitives.
Delaware	277	26	Alabama	16	29
Maryland	493	979	Mississippi	6	41
Virginia	218	63	Louisiana	159	90
Kentucky	152	96	Texas	5	29
Tennessee	45	70	Arkansas	1	21
North Carolina	2	64	Missouri	50	60
South Carolina	2	16			
Georgia	10	89	Totals	1,467	1,011
Florida	22	18			

[Table referred to above.]

	Acres in square miles.	Population.	No. inhab. to sq. m.
New-England States (6)	63,226	2,727,597	43.07
Middle States, including Maryland, Delaware and Ohio, (6)	151,760	8,653,713	57.02
Coast Planting States, including South Carolina, Georgia, Florida, Alabama, Mississippi, and Louisiana, (6)	286,077	3,537,089	12.36
Central Slave States: Virginia, North Carolina, Tennessee, Kentucky, Missouri, Arkansas, (6)	308,210	5,168,000	16.75
Northwestern States: Indiana, Illinois, Michigan, Wisconsin, and Iowa, (5)	250,000	2,735,000	10.92
Texas	237,000	212,000	.89
California	189,000	165,000	.87

In connection with this statement, as affecting the natural increase of the free colored population of the United States, it may be proper to remark, that during the year to which

the census applies, the Colonization Society sent 562 colored emigrants to Liberia. In our calculations respecting the increase of the free colored population, we have considered that class of persons independent of these two causes which respectively swell and diminish their number.

MORTALITY.

The statistics of mortality for the census year, represent the number of deaths occurring within the year as 320,194, the ratio being as one to 72.6 of the living population, or as ten to each 726 of the population. The rate of mortality in this statement, taken as a whole, seems so much less than that of any portion of Europe, that it must, at present, be received with some degree of allowance.

Should a more critical examination, which time will enable us to exercise, prove the returns of the number of deaths too small, such a result will not affect their value, for the purposes of comparison of one portion of the country with another, or cause with effect—the table will possess an interest second to none other in the work, and the many valuable truths which they will suggest, will be found of great practical advantage. Medical men will accord to the Census Board no small meed of credit, for the wisdom manifested in an arrangement which will throw more light on the history of disease in the United States, and present in connection more interesting facts connected therewith, than the united efforts of all scientific men have heretofore accomplished.

The registration of the annual deaths, as well as of the living, marks an epoch in the history of "life contingencies" in the United States. To trace the effect of the wide range of physical features and natural productions upon the human constitution and faculties, presents to every reflecting mind an interesting field of research. Likewise, to investigate the influence of mental occupations and industrial pursuits, and of the wide diversity of climate—from the highlands of Maine to the everglades of Florida—upon the persistence and duration of life, is an object of permanent importance, not only in a scientific, but in a commercial and national point of view. For all such inquiries, the returns of 1850 furnish facilities, less satisfactory indeed than would have been given by a permanent system of registration, but far superior to those hitherto available.

Among the more immediate advantages to be derived from data of this kind, through the medium of life tables, they will form a basis for the equitable distribution of life-interests in estates, pensions, and legacies; they would assign the true valuation of life annuities, assurances, and reversions of heritable property, and tend to protect the public from many ill adjusted financial schemes, founded in ignorance of the true probabilities of life. They would correct a multitude of prejudices and misconceptions respecting the healthiness of the different localities, and besides this, form a common standard of reference in all those moral, sanitary, and mercantile statistics which have brought to light most valuable truths and generalizations, and which give promise of still greater benefits in the advancement of civilization.

Without intending to discuss several attempts heretofore made for the construction of life tables in this country, let it be observed, as is universally admitted, that the ratio of the annual deaths to the contemporary number living at each age, constitutes the implicit element of computation.

An enumeration of the living, or of the deaths only, is insufficient for the purpose, unless the population is stationary, or due allowance is made for the changes inwrought by births and migration during the whole century previous.

The assumption of a stationary population, however, can scarcely be entertained of even the oldest settled parts of the Union. The value and prospects of life, and the influence of climate on longevity, are lost or obscured, both by recent and remote changes. It is within the memory of persons now living, when most of our large cities were in their infancy; when forests were standing on grounds since occupied by the busiest marts of trade, and the corn was waving in the wind where now are the most populous streets.

Periods of unusual emigration or exodus have been followed by a temporary decrease, only to recommence with augmented numbers. But the chief inequality with reference to the present inquiry arises from the fact, that the great mass of emigrants are almost exclusively in the prime of life. Traced upon the texture of society, as these changes must be, in relative excesses and deficiencies at the several ages, the joint statistics of the living and of the annual deaths afford the only feasible mode of arriving at the law of mortality, independent of those former changes.

A life table for the State of Maryland has been prepared from a joint comparison of the abstracts of the returns of 1850. It comprises a very full interpretation of the laws of vitality indicated by the data for the year of enumeration, which may be regarded as one of average mortality. In the present case, the investigation relates exclusively to the white population of Maryland, irrespective of city or country residents or of the sexes, or of foreign or indigenous extraction.

The results and derived tables are specified at length in the Report on Maryland. From the preliminary table of population there given, it would appear that the line of equal division of the living fall upon the age of twenty; one-half of the white population being under, and the other half above, twenty years of age; or distributing with reference to three equal parts, one-third of the population is under thirteen and a half years of age; one-third is included between this and the age of twenty-nine, and the remain-

ing third is above twenty-nine years of age. With respect to the deaths, the points of equal division fall upon ages several years younger than in the corresponding distributions of the living.

For exhibiting the law of mortality for individual lives, the data of the census were equated, and reduced to the simple case of 10,268 infants born on the same day, and commencing life simultaneously.

Assuming that like circumstances will continue to prevail during the years to come in this state, which may be regarded as certain, the population will continually be affected by the same rate of mortality. And hence we may safely estimate and predict, that, of the specified number of infants at the outset of life, 1,243 will perish prematurely in the first year of existence, and 9,025, or numbers in that proportion, will survive to enter upon their second year. A very considerable, but decreasing mortality likewise prevails in the second and third years, leaving only 8,183, or about four-fifths of the original number, to commence upon their fourth year; but after this age, the juvenile system acquires more firmness, and a greater degree of the vigor and experience to guard against disea se. At the age of twenty-one, 7,134 survive to enter upon a more active and responsible career of life; of whom 6,302 attain to "thirty-five"—the meridian of manhood. Proceeding onward for twenty years, to the age of "fifty-five," only 4,727, or less than one-half the original number, then survive. From this age the numbers are decimated more frequently, and the vacated places of the fallen are occupied by advancing generations; till, having passed the mental and physical changes in the round and mystery of life, so graphically portrayed in the "Seven Ages" of the dramatist, a few become centenarians, and linger on the verge of life, till virtually, at the age of one hundred and six years, all have closed their earthly existence.

The table for Maryland also comprises the "Expectations of Life," or the average number of years which the great mass of the white population live after a given present age. This arrangement of the data is justly described as that which is of the most interest to society; for it points out the average number of years in which one member of the community with another participates in the pleasures and cares of life.

An individual, for instance, on attaining his thirtieth birth-day, has an expectancy of nearly thirty-five years. At fifty years of age, the lease of time's estate (so to express the idea) is limited to a little more than nineteen years longer. The maximum expectation—52.86 years—is at the age of four in this table; in the well-known Carlisle table, it is represented to occur at the age of five; and at six in the Swedish table. The joint expectation for two lives, as in the marriage relation, or the average period during which both shall be living, may now be determined in like manner, and also for three or more lives of given ages.

It has been remarked, that tables, properly constructed from sufficient data, never differ widely from each other. For this reason, and on account of their high value, insertion is likewise given in that report to three standard European tables; from no one of which does the Maryland table differ in the comparison so much as they differ among themselves.

Indeed, the duration of life by the Maryland table is found to be almost an exact medium between the British female annuitants and the Carlisle values; which affords strong proof of accuracy. From these tabular forms for Maryland, the probabilities of life can readily be ascertained in a given case, with the value of annuities, assurances, and other reversions dependent upon lives; and, when extended to other localities, the results will eventually promote a most important national purpose, one which has long been desired—that of attaining a correct estimate of the standard of human life among different classes of population in this country.

Table of Deaths during the year ending 1st June, 1850.

	No. of Deaths.	Ratio to the number living.		No. of Deaths.	Ratio to the number living.
Maine	7,545	77.29	Texas	3,046	69.79
New-Hampshire	4,268	74.49	Florida	933	93.67
Vermont	3,132	100.13	Kentucky	15,206	64.60
Massachusetts	19,414	51.23	Tennessee	11,759	85.34
Rhode Island	2,241	65.83	Missouri	12,211	55,81
Connecticut	5,781	64.13	Arkansas	2,987	70.18
New-York	44,339	69.85	Ohio	28,949	68.41
New-Jersey	6,467	75.70	Indiana	12,728	77.65
Pennsylvania	28,318	81.63	Illinois	11,619	73,28
Delaware	1,209	75.71	Michigan	4,520	88.19
Maryland	9,594	60.77	Iowa	2,044	94.03
Virginia	19,053	74.61	Wisconsin	2,884	105.82
North Carolina	10,207	85.12	California	—	—
South Carolina	7,997	83.59	Minnesota	30	202.56
Georgia	9,920	91.93	Oregon	47	282.82
Alabama	9,084	84.94	New-Mexico	1,157	53.15
Mississippi	8,711	69.63	Utah	239	47.61
Louisiana	11,948	42.85	District of Columbia	846	61,09

AGRICULTURAL PRODUCTIONS OF U. S.

STATES.	Acres of land improved.	Value of farming implements and machinery.	Value of live stock.	Bushels of Wheat.	Bushels of Indian Corn.	Tobacco, pounds of	Ginn'd cotton, bales of 400 lbs. each.	Wool, pounds of.	Wine, gallons of.	Butter, pounds of.	Cheese, pounds of.	Hay, tons of.	Maple Sugar, lbs. of
Maine	2,019,593	$2,363,517	$9,831,488	367,980	1,741,715	—	—	1,366,866	306	8,488,234	2,201,105	794,780	87,541
New-Hampshire	2,251,388	2,314,125	8,871,901	185,658	1,574,670	50	—	1,108,476	35	6,977,056	3,196,563	598,854	1,292,429
Vermont	2,322,923	2,774,939	11,292,748	493,606	1,625,776	—	—	3,492,087	140	12,138,095	6,735,006	763,579	5,159,641
Massachusetts	2,127,924	3,173,809	9,619,964	29,784	2,326,167	119,306	—	576,736	4,122	7,825,337	7 124,461	645,749	768,596
Rhode Island	337,672	473,385	1,466,636	39	516,133	—	—	111,937	842	1,066,625	296,748	73,353	—
Connecticut	1,734,277	2,043,026	7,353,996	40,167	1,996,462	1,383,932	—	512,529	3,346	6,620,579	4,512,019	499,706	37,781
New-York	12,285,077	22,217,563	74,672,356	13,073,357	17,844,808	70,222	—	10,021,507	6,483	82,043,823	49,785,905	3,714,734	16,310,764
New-Jersey	1,770,337	4,267,124	10,678,264	1,508,216	8,605,396	—	—	375,932	517	9,070,710	500,819	429,119	5,886
Pennsylvania	8,619,631	14,931,993	42,146,711	15,482,191	19,707,702	857,619	—	4,784,367	23,839	40,554,741	2,395 279	1,896,265	2,218,644
Delaware	524,364	471,385	1,718,386	466,784	2,888,896	—	—	52,887	85	1,034,867	3,187	30,159	—
Maryland	2,797,905	2,463,443	7,997,634	4,494,680	11,104 631	21,199,281	—	477,438	2,099	4,206,160	3,925	145,070	47,740
District of Columbia	17,083	40,220	71,573	17,370	65,280	15,000	—	—	8	14,869	—	1,974	—
Virginia	10,150,106	7,021,658	33,607,962	14,516,950	35 538,582	56,516,492	2,767	2,850,909	4,280	11,126,795	434,850	370,177	1,223,905
North Carolina	5,443,137	4,056,006	17,837,108	2,147,899	28,286,999	12,058.147	98,028	915,289	10,801	4,144,258	95,043	1 5,180	27,448
South Carolina	4,074,855	4,143,709	15,060,015	1,066,278	16,272,308	73,235	300,901	487,243	3,680	2,979,975	4,810	25,427	200
Georgia	6,323,426	5,901,050	25,727,408	1,085,784	30,428,540	420,123	494,023	988,802	664	4,640,074	46,391	23,427	50
Florida	349,423	675,885	2,945,668	1,225	1,993,462	982,584	45,078	23,235	10	375.853	18,324	2,620	—
Alabama	4,387,088	5,066,814	31,558 686	292,429	28,485,966	163,605	560,360	637,829	14	3,961,592	30,423	31,801	473
Mississippi	3,489,640	5,759,738	19,303,593	215,181	21,836,154	48,349	4,94,774	556,057	301	4,388,112	20,314	12,517	110
Louisiana	1,567,998	11,326,310	10,983,508	84	10,915,051	23,922	163,034	105,393	—	685,136	1,148	20,672	260
Texas	635,913	2,095,308	10,263,086	42,448	5,796,735	60,770	55,945	122,118	94	2,319,574	92,018	8,327	—
Arkansas	780,333	1,594,941	6,728,254	193,902	8,857,296	224,164	64,987	181,427	10	1,854,104	28,440	3,924	8,825
Tennessee	5,087,057	5,351,178	29,134,193	1,638,470	52,137,863	20,144,380	192,635	1,340,833	204	8,130,636	179,577	72,942	159,647
Kentucky	6,068,633	5,388,092	29,898,386	2,184,763	58,922,788	55,765,259	1,669	2,246,168	4,202	10,115,267	228,744	115,296	388,525
Ohio	9,730,650	12,716,153	43,276,187	14,967,056	59,788,750	10,480,967	—	10,089,607	44,834	34,180,458	21,350,478	1,360,636	4,521,643
Michigan	1,924,582	2,764,171	8,005,429	4,918,706	5,620,215	2,225	—	2,047,364	1,443	7,043,794	1,012,551	394,717	2,423,897
Indiana	5,019,822	6,748,722	22,308,965	6,625,474	52,887,561	1,035,146	— 5	2,502,763	13,004	12,748.18	666,986	402,791	2,921,638
Illinois	5,114,041	6,349,826	24,817.954	9,433,965	57,179,283	844.129	— 8	2,129.139	2,343	12,605 55	1,283,758	586,011	246,078
Missouri	2,911,422	3,977,449	19.764.672	2,943 840	35,709,042	17,038,364	—	1,635,182	10,193	7,762,12	201,597	116,284	171,943
Iowa	814,173	1,202,978	3,602,769	1,442,074	8,475,027	2,012	—	363,398	420	1,933,128	198,444	84,598	70,680
Wisconsin	1,011,308	1,701,047	4,594,717	4,292 208	1,983,378	768	—	243,065	68	888,81	440,961	295,227	661,969
California	34,312	88,593	3,456,725	98,282	90,082	1,000	—	4,800	—	705	150	2,038	—
Minnesota	5,035	15,981	103.859	3,422	16,665	—	—	280	—	1,10	—	2,069	1,950
Oregon	135,357	183,403	1,875,989	228,882	2,928	325	—	29,596	—	211,734	36,030	373	—
Utah	15,219	78,495	533,951	103,441	9,144	—	—	8,897	—	74,064	32,646	4,288	—
New-Mexico	161,296	78,217	1,504,497	186,575	355 795	1,118	—	32,641	2,053	10	5,687	—	—
Total	112,042,000	151,820,273	552,705,238	104,799,230	591,586,053	199,532,494	2,474,214	52,422,797	141,295	212,202,22	103,184,585	13,605,3	32,759.363

OTHER AGRICULTURAL PRODUCTS.

CANE SUGAR, 218,644 hhds. of 1000 lbs. each, of which Louisiana produced 203,486; Florida, 47,811; Texas, 7,017; Georgia, 1,373.

HEMP—Dew-rotted, tons 62,189, of which Missouri produced 17,031 and Kentucky 37,168. The whole amount of water-rotted hemp 13,059 tons, 4,000 being in Missouri, 2,400 in Kentucky, the balance chiefly in western states.

FLAX SEED, total 567,749 bushels—185,000 being in Ohio, 80,000 in Kentucky, 50,000 each in Virginia and New-York, the rest generally in the other states.

RICE, returns not completed. TOTAL HOMEMADE MANUFACTURES in the states, $27,528,545.

AGRICULTURE.

The great amount of labor requisite to the extraction of the returns of agriculture will admit, at this time, of presenting but limited accounts, though, to some extent, of the most important separate interests.

The returns of the wheat crop, for many of the Western states, will not at all indicate the average crop of those states. This is especially the case with Ohio, Indiana, and Illinois, from which, especially the former, the assistant marshals return a "short crop," to the extent of fifty per cent. throughout the whole state. The shortness of the whole crop in Ohio, in 1849, is verified by returns made during the subsequent season, by authority of the Legislature. The causes which affected the wheat crop in those states were not without their influence in reducing that of Western Virginia and Western Pennsylvania to some considerable extent.

MANUFACTURES.

The period which has elapsed since the receipt of the returns, has been so short, as to enable the office to make but a general report of the facts relating to a few of the most important manufactures. If, in some instances, the amount of "capital invested" in any branch of manufacture should seem too small, it must be borne in mind, that where the product is of several kinds, the capital invested, not being divisible, is connected with the product of greatest consequence. This, to some extent, reduces the capital invested in the manufacture of bar iron, in such establishments where some other article of wrought iron predominates—sheet iron, for example. The aggregate, however, of the capital invested, in the various branches of wrought iron, will, it is confidently believed, be found correct.

The entire capital invested in the various manufactures in the United States, on the 1st of June, 1850—not to include any establishment producing less than the annual value of $500—amounted, in round numbers, to $530,000,000

Value of raw material	550,000,000
Amount paid for labor	240,000,000
Value of manufactured articles	1,020,300,000
Number of persons employed	1,050,000

More minute particulars respecting these separate interests will be found incorporated in the tables.

THE PRESS.

The statistics of the newspaper press form an interesting feature in the returns of the seventh census.

It appears that the whole number of newspapers and periodicals in the United States, on the first day of June, 1850, amounted to 2,800. Of these, 2,494 were fully returned, 234 had all the facts excepting circulation given, and 72 are estimated for California, the Territories, and for those that may have been omitted by the assistant marshals.

From calculations made on the statistics returned, and estimated circulations where they have been omitted, it appears that the aggregate circulation of these 2,800 papers and periodicals is about 5,000,000, and that the entire number of copies printed annually in the United States, amounts to 422,600,000.

The following table will show the number of daily, weekly, monthly, and other issues, with the aggregate circulation of each class:

	No.	Circulation.	No. copies printed annually.
Dailies	350	750,000	235,000,000
Tri-weeklies	150	75,000	11,700,000
Semi-weeklies	125	80,000	8,320,000
Weeklies	2,000	2,875,000	149,500,000
Semi-monthlies	50	300,000	7,200,000
Monthlies	100	900,000	10,800,000
Quarterlies	25	29,000	80,000
	2,800	5,000,000	422,600,000

Four hundred and twenty-four papers are issued in the New-England states, 876 in the Middle states, 716 in the Southern states, and 784 in the Western states.

The average circulation of papers in the United States, is 1,785. There is one publication for every 7,161 free inhabitants in the United States and Territories.

In accordance with the views expressed in the commission with which the department honored me in May last, I visited, during the three summer months, the capitals of many of the important governments of Europe, for the purpose of examining into the methods adopted for the procuring and classification of such facts as are enumerated by those governments in their statistical investigations, in order that our own census might, when published, prove of the greatest value to ourselves, and not seem inferior to those of countries which have the credit of having paid more attention to statistical science, although they may not have made greater advances in what we esteem rational forms of government.

It seems more desirable to possess every ray of light on this subject, when considering that the present census is one of unexampled importance to ourselves and our posterity,

as exhibiting our condition to the middle of a century, and illustrative of the progress of a people, flourishing beyond all precedent, under a new form of government; one whose history and example must, as it becomes known, exert an important influence throughout the civilized world. This census, while it exhibits our progress for sixty years, with a precision and certainty which no other country has been able to enjoy, and gives a reality to the past, unattainable with respect to any other people, discloses the present statistical history, and that for the first time, of a country embracing more than a million square miles of territory, the future destiny of which is inseparably connected with that of the original thirteen states. Not only, however, in connection with these statistical investigations, did it seem desirable to avail ourselves of any improvements introduced into the last censuses of Europe, to enable us to prepare our own great national work on the best system; but for many of the practical purposes to which statistics are applied and deemed valuable, it seems desirable to effect some arrangement by which the publication of the results of the great elementary facts among nations should be made as nearly simultaneous as possible, and classified on the same general principles, as far as the facts taken would justify; in order that, while we use every exertion to analyze society at home, we may, from their statistics, enjoy the advantage of being able to arrive at a similar analysis with respect to other nations, and that, while contemplating our own progress from time to time, we may be able to institute comparisons with the advancement of other people. Heretofore, at least in every step of investigation, the statist in wishing to prosecute inquiries respecting different nations, touching the great elements of society, has met with the insurmountable difficulty arising from the different elements elucidated, and the diverse methods of combination adopted, which lessen the value of their labors, reciprocally, and in the absence of more reliable data, lead to the frequent use of one set of elements to ascertain the condition of some different set, producing results equally unsatisfactory to the man of science, as they are often dangerous, if made the basis of the political economy and legislation of a government.

In addition to the effort to effect a general sympathy or concert of action among nations, with reference to their periodical statistics, it has been my aim, in which I have succeeded, often in the absence of published records, to procure a knowledge of the exact condition of the people of all classes in each country visited, and learn their true state with reference to numbers, and the products of their agriculture and manufactures, their social and moral condition, the state of education, the price of labor, and the practical management of the farming interests; in no case, however, relying upon information not either obtained from personal observation, or derived officially, and in a manner which can leave no doubt of its correctness. My opportunities abroad will not only enable me to effect valuable improvements in compiling our census, but it will be my aim to make the statistical facts useful to the country by forming them into a report to be supplemental hereto, the completion of which has been retarded by my other official duties.

Another object had in view, was the procuring information with reference to the manner in which the various offices in Europe, especially those connected with agriculture and statistics, are organized, and the manner in which the information obtained is made available to the government and people. To the attainment of these purposes, the few weeks to which my time limited me, and the diversity of languages among those with whom my investigations were pursued, interposed difficulties only surmounted by a zealous determination to effect the duty undertaken—one in which failure must have ensued, were it not for the official character sustained in connection with the office here, and that with which the department honored me, as its representative abroad: the one enabling me to impart as much valuable information to others as was solicited in return; the other giving facilities of intercourse, and a claim to consideration, which was never slighted by any officer of a foreign government.

In England, in addition to the free intercourse enjoyed with the officers of government connected with statistical matters, several opportunities were offered for bringing the object of my mission before public audiences; and invitations were tendered me to address the members of the London Statistical Society at its annual meeting in that city, the Society of Actuaries at Richmond, and the British Association at Ipswich, during its annual meeting, which was attended by Prince Albert, one of its members, and many of the most distinguished literary and scientific gentlemen of Great Britain and the Continent. The Statistical Council of Belgium, M. Quetelet, President, gave me a place in their Board at one of its regular meetings. On each opportunity it gave me pleasure to present a full account of the character and extent of our investigations, under the act of Congress, for taking the seventh census, to make a fair and impartial exhibit of our progress in wealth and numbers during the past ten years, and at the same time urge the propriety of mutual efforts towards the attainment of more uniform and useful statistical publications by different governments. The propriety of this measure was felt by individuals who had made statistics a study, and the necessity for some action was universally conceded; and it affords me infinite gratification to state, that an arrangement has been made for a general statistical Congress, to be held at Brussels, (Belgium,) during the ensuing fall—a measure which has received the approbation of several of the most distinguished statists of Europe, and from which the most beneficial results are anticipated. Mr. Porter, of the Board of Trade, has been appointed a delegate to this Statistical Congress from England. He is a gentleman distinguished no less by his laborious researches and valuable contributions to the science of political economy and statistical knowledge of the British empire, than for the elevated position he holds as a public officer and man of letters.

J. C. KENNEDY.

		1790.	1800.	Ratio of Increase	1810.	Ratio of Increase	1820.	Ratio of Increase
N. England.	Maine	96,540	151,719	57.1	228,705	50.7	298,335	30.4
	New-Hampshire	141,899	183,762	29.5	214,360	16.6	244,161	13.9
	Vermont	85,416	154,465	80.8	217,713	41.	235,764	8.2
	Massachusetts	378,717	423,245	11.7	472,040	11.5	523,287	10.9
	Rhode Island	69,110	69,122	–	77,031	11.4	83,059	7.8
	Connecticut	238,141	251,002	5.4	262,042	4.3	275,202	5.
		1,009,823	1,233,315	22.1	1,471,891	19.3	1,659,808	12.8
Middle.	New-York	340,120	586,756	72.5	959,049	63.4	1,372,812	43.1
	New-Jersey	184,139	211,949	15.1	245,555	15.9	277,575	13.
	Pennsylvania	434,373	602,365	38.6	810,091	34.4	1,049,458	29.5
		958,632	1,401,070	46.15	2,014,695	43.79	2,699,845	34.
Atlantic.	Delaware	59,096	64,273	8.7	72,674	13.	72,749	–
	District of Columbia	–	14,093	–	24,023	36.8	33,039	37.5
	Maryland	319,728	341,548	6.8	380,546	11.4	407,350	7.
	Virginia	748,308	880,200	17.6	974,622	10.7	1,065,379	9.3
	North Carolina	393,751	478,103	21.3	555,500	16.2	638,829	15.
	South Carolina	249,073	345,591	38.7	415,115	20.1	502,741	18.1
	Georgia	82,548	162,101	96.4	252,433	55.1	340,987	35.1
	Florida	–	–	–	–	–	–	–
		1,852,504	2,285,909	23.39	2,674,913	17.01	3,061,074	14.43
Northwestern.	Ohio	–	45,365	–	230,760	408.7	581,434	152.
	Indiana	–	4,875	–	24,520	403.	147,178	500.2
	Illinois	–	–	–	12,282	–	55,211	349.5
	Iowa	–	–	–	–	–	–	–
	Wisconsin	–	–	–	–	–	–	–
	Michigan	–	–	–	4,762	–	8,896	86.8
	Minnesota, (Territory)	–	–	–	–	–	–	–
		–	50,240	–	272,324	442.04	792,719	191.09
Southern & Western.	Kentucky	73,077	220,955	200.	406,511	83.1	564,317	38.8
	Missouri	–	–	–	20,845	–	66,586	219.5
	Alabama	–	–	–	–	–	127,901	–
	Louisiana	–	–	–	76,556	–	153,407	100.4
	Tennessee	35,791	105,602	200.	261,727	147.8	422,813	61.5
	Mississippi	–	8,850	–	40,352	356.	75,448	87.
	Arkansas	–	–	–	–	–	14,273	–
	Texas	–	–	–	–	–	–	–
	New Mexico, (Ter'y)	–	–	–	–	–	–	–
		108,868	335,407	208.08	805,991	140.3	1,424,745	76.76
	*California	–	–	–	–	–	–	–
	Oregon (Territories.)	–	–	–	–	–	–	–
	†Utah (Territories.)	–	–	–	–	–	–	–
	Seamen in U. S. service	–	–	–	–	–	–	–
	Total	3,929,827	5,305,941	35.01	7,239,814	36.45	9,638,191	33.12

Statement of Population by Classes decennially, from 1790 to 1850, inclusive.

Whites	3,172,464	4,304,489	35.7	5,862,004	36.2	7,866,569	34.19
Free colored	59,466	108,395	82.2	186,446	72 2	233,524	25.25
Slaves	697,897	893,057	27.9	1,191,364	33.4	1,538,098	29.1
Seamen in U. S. service	–	–	–	–	–	–	–
	3,929,827	5,305,941	–	7,239,814	–	9,638,191	–
Total Free	3,231,930	4,412,884	36.4	6,048,450	37.	8,100,093	33.92
Total colored population, free & slaves	757,363	1,001,452	32.2	1,377,810	37.6	1,771,622	28.58

* The population of California is set down at 165,000 as an approximation to the real population, which may be essentially varied by complete returns. Should the returns vary from our estimate so far as to reduce the population of California 35,000, South Carolina will be entitled to a member additional, as being next above on the list of fractions. The official returns of California will slightly affect the calculation respecting the aggregate increase of the free population for the year 1850. Ratio of representation, 91,716.

† The returns of Utah have been received since the preparation of this report.

		1830.	Ratio of Increase.	1840.	Ratio of Increase.	1850.	Ratio of Increase.	Represent. of each State. No.	Represent. of each State. Fractions.	Present No. Reps.
New England.	Maine	399,455	33.9	501,793	26.2	583,188	16.22	6	20,892	7
	New-Hampshire	269,328	10.3	284,574	5.6	317,964	11.63	3	36,816	4
	Vermont	280,652	19.	291,948	4.	314,120	7.59	3	32,972	4
	Massachusetts	610,408	16.6	737,699	20.8	994,499	34.81	11	*57,339	10
	Rhode Island	97,199	17.	108,830	11.9	147,544	35.57	2	*53,828	2
	Connecticut	297,675	8.1	309,978	4.1	370,791	19.61	4	*89,643	4
		1,954,717	17,7	2,234,822	14.3	2,728,106	22.07			
Middle	New-York	1,918,608	39.7	2,428,921	26.6	3,097,394	27.52	33	4,766	34
	New-Jersey	320,823	15.5	373,306	16.3	489,555	31.14	5	20,886	5
	Pennsylvania	1,348,233	28.5	1,724,033	27.9	2,311,786	34.09	25	*62,602	24
		3,587,664	32.88	4,526,260	26.16	5,898,735	30.32			
Atlantic.	Delaware	76,748	5.5	78,085	1.7	91,535	17.22	1		1
	District of Columbia	39,834	29.2	43,712	23.3	51,687	18.24			
	Maryland	447,040	9.7	470,019	5.1	583,035	24,04	6	*78,307	6
	Virginia	1,211,405	13.7	1,239,797	2.3	1,421,661	14,66	13	14,341	15
	North Carolina	737,987	15.5	753,419	2.1	868,903	15.32	8	3,810	9
	South Carolina	581,185	15.6	594,398	2.3	668,507	12.46	5	45.933	7
	Georgia	516,823	51.2	691,392	33.8	905,999	31.03	8	3,598	8
	Florida	34,730	–	54,477	56.8	87,401	60.43	1		1
		3,645,752	19.1	3,925,299	7.66	4,678,728	19,19			
Northwestern.	Ohio	937,903	61.3	1,519,467	62.	1,980,408	30,33	21	12,372	21
	Indiana	343,031	133.	685,866	99.9	988,416	44,11	11	*51,256	10
	Illinois	157,445	185.2	476,183	202.4	851,470	78,81	9	8,026	7
	Iowa	–	–	43,112	–	192,214	345.84	2	4,782	2
	Wisconsin	–	–	30,945	–	305,191	890.48	3	24,043	3
	Michigan	31,639	255.6	212,267	570.9	397,654	87.33	4	22,790	3
	Minnesota, (Territory)	–	–	–	–	6,077				
		1,470,018	85.43	2,967,840	101.89	4,721,430	59.08			
Southern & Western.	Kentucky	687,917	21.9	779,828	13.3	982,405	25.98	10	*54,568	10
	Missouri	140,455	110.9	383,702	173.2	682,043	77.75	7	*84,778	5
	Alabama	309,527	142.	590,756	90.8	771,671	30.62	7	*72,218	7
	Louisiana	215,739	40.6	352,411	63.3	511,974	45.27	4	41,501	4
	Tennessee	681,904	61.3	829,210	21.6	1,002,625	20.91	10	*63,396	11
	Mississippi	136,621	81.	375,651	175.	606,555	61.46	5	14,015	4
	Arkansas	30,388	112.9	97,574	221.1	209,639	114.85	2	3,414	1
	Texas	–	–	–	–	212,592	–	2	1,895	2
	New-Mexico, (Ter'y)	–	–	–	–	61,547				
		2,202,551	54.59	3,409,132	54.78	5,041,051	47.86			
	*California	–	–	–	–	165,000	–	2		2
	Oregon } Territories.	–	–	–	–	13,293			*Have the addition on account of the fractions.	
	†Utah .. }	–	–	–	–	11,380				
	Seamen in U. S. service	5,316	–	6,100						
	Total	2,866,020	33.48	17,069,453	32.67	23,257,723	36.25	233		233

Statement of Population by Classes decennially, from 1790 to 1850, inclusive.

Whites	10,537,378	33.95	14,189,89‡	34.7	19,630,73‡	38.28			
Free colored	319,599	36,85	386,24‡	20.9	428,66‡	10·9			
Slaves	2,009,043	30,61	2,487,213	23.8	3,198,324	28.58			
Seamen in U. S. service	–	–	6,100‡						
	12,866,020	–	17,069,453	–	23,257,723	36.25			
Total free	10,856,977	34,03	14,376,140	34.1	20,059,399	37.61			
Total colored population, free & slaves	2,328,642	31,44	2,873,458	23.4	3,626,985	26.22			

* For population of California, see page 688.
† The returns of Utah have been received since the preparation of this report.
‡ Added to white population.

2.—CULTURE OF COTTON IN MACEDONIA.

The following extract from the report of an inquest lately instituted by the French Minister of Commerce, touching our great staple, cotton, will not be void of interest to most of our readers:

The cultivation of the Brazil cottons has not been tried in Macedonia; but for several years trial has been made in the districts of *Seres* and *Drama*, of the fine qualities of the United States, which have been perfectly successful. It has been ascertained, moreover, that the United States cottons are superior in value, by over twenty per cent., to any which have hitherto been cultivated in the province. Nevertheless, the successful trial of them has not been followed up, because they have to be picked very rapidly, and in Macedonia the hands are too few, and perhaps the cultivators too lazy, to comply with this condition. In the next place, the ginning presents more difficulties than for the kinds of cotton now cultivated; for it requires the use of machines, the cost of which exceed the means of the cultivators and proprietors of the country, who, indebted almost without exception, can only raise money by paying usurious interest. The kind of cotton now cultivated is separated from the seed by means of large cylinders, the expense of which is not more than $1 to $1 20. The principal cotton districts in Macedonia are those of *Seres*, *Drama* and *Zigna*. Since the commencement of the present century, the cultivation of cotton has been, to a considerable extent, replaced by that of grain and Indian corn.

The cultivation of cotton in Thessalia is of little importance, producing scarcely enough for local consumption.

In *Anatolia* herbaceous cotton has been cultivated for a long period in the districts of Aydin and Brousse. It is planted in March and picked in September. It is cultivated so easily, and the quality is so good, that before the introduction of the *Jumel*, or cotton tree, into Egypt, that country used to import all its cotton seed from Anatolia. Even at the present day she has recourse to this province at times. But the cotton which grows from this seed does not in its turn produce seed suitable for planting, and she found it necessary every year to get supplies from Asia Minor. This inconvenience, joined to the fact that the Anatic plant lasts but one year, while the cotton tree produces for seven years, has contributed more and more to make Egypt abandon the Anatolian cotton, though it is reputed to be of a superior quality.

The demand having fallen off for Anatolian cotton, the production has been diminished also. In fact, the annual exportation, which, before the Americans had carried the cultivation of cotton to such an extent, had risen, for Smyrna, to from 60,000 to 70,000 bales per year, is reduced now to from 12,000 to 15,000. The weight of the bales varies from 450 to 660 lbs.—this difference growing out of the necessity of regulating the weight to the strength of the camels used in transporting the cotton. Each animal carries two bales.

The cotton of Anatolia is divided into five qualities: the first comprising the cottons of *Sobondja* and *Aydin;* the second those of *Kirk-Agadje;* the third those of *Canaba;* the fourth those of *Kinck* and of *Pergame;* the fifth those of *Magnesia*, which are the least esteemed. The average crop each year is about 30,000 bales, or say 16,500,000 pounds. It often happens that more cotton is produced in the year than is sufficient both for the demands for exportation and for home consumption. In such cases the growth of corn is substituted the following year for that of cotton, and the trade in the latter is confined, of course, to what remains on hand. But these facts have no particular influence on the cotton market; we can only conclude from them that in case of an extraordinary demand, Anatolia could furnish much larger crops. The 30,000 bales which now constitute her annual production, are disposed of thus: 8,000 bales. say 4,500,000 pounds, are retained for home consumption; from 12,000 to 15,000 bales are exported; and about 10,000 bales are used in the manufactories of Aydin, Canaba, and Menemen. One of the principal importers of cotton from Asia Minor is Marseilles. In 1850, she imported, in forty-five vessels, 7,618 bales, containing about 4,190,000 pounds. In 1851, however

the quantity was much smaller, as up to November 26, she had only received 3,995 bales, containing about 2,200,000 pounds. The first quality cotton from Anatolia was worth in November, 1851, about five cents per pound; the lowest quality was worth about 4½ cents. This last year the crop has been very small, on account of the dryness of the season.

We learn from the same source, that the Sultan is this year trying, on a large scale, in the country around Smyrna, the culture of cotton from seed procured expressly for this purpose from the southern United States. We have not yet learned the result of the experiment.

3.—COTTON CULTURE IN CAUCASIA.

I extract from the Annals of Foreign Commerce, published by the Minister of Agriculture and Commerce, at St. Petersburgh, the following notice of the culture of cotton in Caucasia. This is ever a subject of interest to your Southern readers:

Cotton is one of the most important productions which Russia is likely to receive from Transcaucasia. Up to 1830, she had imported from foreign countries only about 250,000 *pouds*, (about 9,000,000 pounds,) but in 1850, the importation had increased to over 1,000,000 *pouds*, (or 36,000,000 pounds.) These figures show the increasing magnitude of the cotton interest in Russia, and it is interesting to know that so important a staple can be cultivated to a considerable extent in Transcaucasia.

This, however, is no new discovery, for cotton has been grown in the province of Armenia for a long period; though the Armenian cotton has generally been of a very short staple and poor quality. The production at present is about 130,000 *pouds*, (4,685,000 pounds,) and this is mostly used in the country for spinning, and in the manufacture of wadding.

In 1835, Baron Rosen, commander-in-chief of the country, introduced some cotton-seed from Egypt. The first trials of it, however, were not continued; but in 1845, Prince Worontzoff, Lieutenant of Caucasus, ordered more seed, not only from Egypt, but from Malta and Bourbon.

Shortly after this, (in 1847,) new plantations were established in four villages near the Kiow, and the cotton produced was in no way inferior to that of Egypt. The average crop was sixteen to twenty *pouds*, (say 576 to 720 pounds,) per *dessiatine*, (a *dessiatine* being about 2¾ acres,) and it was worth at Moscow about 72 rubles silver ($6 76) per *poud*.

Nevertheless, these four villages raise only about 500 *pouds* (18,000 pounds) for local consumption. It has been calculated that a *poud* (36 pounds) could be raised and delivered in Moscow for from 3 rubles 4 cop. to 4 rubles, (from $3 to $3 86,) and could be sold there for from 6 to 7 rubles.

To extend this business, and to raise from the first year 2,000 *pouds* (72,000 pounds) of cotton, it will be necessary to have a hundred *dessiatines* of land (about 275 acres) near the Kiow, or the Souscha, and a capital of 15,000 rubles.

In Transcaucasia there are more than 400,000 *dessiatines* (1,100,000 acres) of land suited to the culture of cotton, and it should be remarked that a sixth part of this quantity would be sufficient to supply the whole cotton demand of Russia.

4.—NORTHERN SHIPS AND SOUTHERN RAIL-ROADS.*

Has it ever occurred to the northern ship-owners that there is probably no interest more directly connected with the advancement of New-Orleans than their own? That such is the fact no elaborate argument is needed to prove; for any intelligent mind will be convinced of it by a moment's reflection upon the course of trade. New-Orleans, as she now stands, is mainly the accretion, so to speak, of a large trade with the interior, and her prosperity and progress can be secured only by retaining that portion of her internal commerce which she yet possesses, and by opening new avenues and new resources to swell the aggregate of her "Receipts from the Interior." And in this prosperity and progress, we assert, the northern ship-owners are directly interested; for the more we receive, the more their ships will carry away; and every pound of produce of whatever nature, that is drawn from the valleys of the Ohio and the Mississippi to the Eastern cities by means of the northern canals and rail-roads, is so much freight lost to

* From New-Orleans Prices Current.

them. Now, gentlemen ship-owners of the North, we beg leave respectfully to inform you that, after years of culpable supineness, which all now acknowledge, our city and state, and our neighboring states, are awakening to the necessity of bringing Art to the aid of Nature; and while the latter still yields her rivers (such as they are) to the navigation of the flatboat and the steamboat, the former is making efforts to open new resources by means of rail-roads, the want of which has been signally demonstrated during the past season. In this new enterprise money is wanted; and we advise you, as you value your own interest, to send on your capital to its aid. By so doing, we firmly believe that you will not only make a safe investment, in the common acceptation of the term, but will assist your main interest, which is the furnishing of profitable employment for your ships. And it should be remembered by ship-owners, that the advantage of increased receipts at our port is not confined to outward freights alone. A safe and profitable investment, which, as we conceive, our rail-road stocks would furnish, and the increased amount of outward freight which would result from the construction of rail-roads, would seem to be sufficient incentives to a liberal outlay of their capital. But besides these, there are the return freights, the extent of which, of course, depends mainly upon the amount of produce exported, and which will be greater or less as the trade of our city is more or less extended and prosperous. These views, for aught we know, are familiar to all, and we claim no merit of originality; but as we do not remember to have heard them in conversation, or to have seen them in print, we have presumed to put them forth in the crude form in which they here appear. Please take them for what they are worth.

5.—NEGRO LIFE IN WASHINGTON.

A correspondent of the New-York Express, writing from Washington, says:

"It is not of enjoyments in high life that I took up my pen to write you this morning, but to describe an assembly more properly pertaining to 'Life Below Stairs,' that has just taken place in the 'West End.' A week ago one of my acquaintances brought for my inspection an invitation she had received, and which she wished to accept. In an envelop, covered with embossed cupids and roses, directed to Miss ——, was a printed card as follows:

"'The *Psyc Club* respectfully invites the pleasure of Miss —— company on Wednesday evening next, 3rd of March, at 8 o'clock.' [Managers' names, &c.]

"The very respectable gentlemen of color, whose names were down as managers, told what the affair would be, and, in reality, no party given in Washington this season was more costly or more enjoyed. It was held in a large brick house on the avenue, which was lent to them by the owner, a gentleman of high standing here, the whole mansion being open for the occasion. The two parlors below were filled with ladies of color, of various ages, matrons and maidens, dressed in satins, thules, bareges, flowers, muslins, with bouquets, fans and embroidered handkerchiefs. They were received by the managers, who wore large white satin rosettes, and were indefatigable in their attentions to all. A third room on the lower floor was open the entire evening, in which were hot chocolate, cakes, oysters, lemonade and punch. The third story was given up for dressing-rooms, one for ladies, one for gentlemen. The second floor was occupied by the supper. Two long tables were elegantly arranged. Everything to be seen on the supper table of a party given in the grandest mansion in the city was there, even to the very silver dishes, that figure night after night at the entertainments of our secretaries and ministers. M. Gutier (the confectioner) and his assistants presided the entire evening as carefully as if serving the President. There was no dancing or music, because the club were all members of the church; only conversation and feasting, to while away the time. The entire expense was borne by ten of the gentlemen. Now, what a country this is, this land of slavery, where such enjoyments for the colored race are sanctioned by the whites—this much decried spot! whereas, at the North, was ever such a party heard of? Are there any ten servants there, (for these men are themselves servants, and wait on those who pay them wages,) who could afford to give such a feast to their friends, or who know how to do it, in such style and with so much propriety? No; they can scarcely get bread to eat by the sweat of their brow, in those lands of freedom where they pine and die, utterly neglected by the sympathizing abolitionists, who spill oceans of ink, and shed crocodile tears, only, in their service, but let them starve at their doors meantime."

GALLERY OF INDUSTRY AND ENTERPRISE.

HENRY D. BACON, of St. Louis.

WITH A PORTRAIT.

No. 18.

Mr. Bacon, though scarcely yet thirty-five years of age, has achieved for himself, by his resolute purpose, indomitable energy, quick and accurate judgment, and sound intelligence, a reputation in commercial circles scarcely second to that of any of the veterans who are looked up to in the western valley as the Nestors and Ulysses of the mercantile profession.

A son of Massachusetts, like the most of his countrymen, he was not unwilling to leave, at an early age, its granite hills and ice lakes, which have a great deal more of prose than poetry about them, despite of Longfellow and Emerson, and seek an abode and fortune in the rich and thriving regions of the West, where man and nature meet on more equal terms, and where the "fickle goddess" pays penance for coquetries that are past.

Arriving at St. Louis in 1837, Mr. Bacon opened a business corresponding with his means, in which he had the ordinary share of profits and losses, the one alternating with the other, or balancing or excelling in that sort of very exciting, but not always very pleasant experience of mercantile life. It is sufficient that in this sphere he maintained credit and character, and if we must say it, for the words are talismanic, opening all hearts, as indicating the highest possible success, *made money*.

In 1845 he married the daughter of D. Page, Esq., a veteran and wealthy citizen of St. Louis, prominent in business; and being admitted into the house, soon succeeded to almost the entire management of its very extended affairs.

In 1848, at his instance, the present widely known and distinguished banking-house of Page & Bacon was established at St. Louis; and founded as it was upon the immense private resources of its head, and the acknowledged zeal, energy, integrity and experience of Mr. Bacon, it soon attained public confidence, which it has preserved unshaken, whilst conducting an enormous share of the monetary matters of St. Louis. No public or private banking-house maintains higher rank.

In 1850, a branch of the banking-house was opened in California, and the business of the two establishments exceeds in extent $35,000,000 per annum.

In all the extended and important concerns of this establishment, Mr. Bacon has proved himself fully competent; and we question if there is, in the whole western valley, an individual who could, with greater skill, administer and control them. This is high reputation for so young a man, but it is well established.

As a citizen, Mr. Bacon has never been wanting in public spirit, or a disposition to advance the common weal. On several occasions he has been elected a member of the City Council, in which body his advocacy of wise and liberal measures was always to be counted upon and secured. No benevolent and generous cause ever found him dead to its claims; but, on the contrary, there are hundreds who are the living witnesses of his disinterested and kindly charities. It is thus, in the march to fortune, he finds the ready welcome of all, giving him a hearty God speed.

The young men of St. Louis have ever found in him a spirit akin, in many respects, to their own, and sympathizing in their pursuits, their hopes, their pleasures, and their

fortunes. A kind adviser, a ready friend, administering services when such services tell with most effect, and far beyond their cost, Mr. Bacon has attained an enviable reputation among this class. But the other day he came forward most liberally to aid in the proposed structure of a splendid Mercantile Society Hall. We extract from the minutes of the Association an acknowledgment of this service, as follows:

"We have now the pleasure of announcing an instance of princely liberality on the part of an eminent banker of this city, of which it is hard to say whether it confers greater honor upon the Mercantile Library Association, for whose benefit it is intended, or upon the gentleman whose powerful assistance it has so opportunely received. H. D. Bacon, Esq., has authorized us to state, that he will take stock in our company to the amount of $20,000, if the remainder of the necessary sum is obtained. That unprovided balance is $30,000. Incited by this signal example of public spirit and benevolence, there can no longer remain a doubt that our citizens will at once subscribe the balance of the untaken stock. When informed of the precarious situation of the enterprise, Mr. Bacon promptly came to the rescue, and is therefore justly entitled to the enviable distinction of having ensured its triumphant success. Not less certainly has he, at one stride, taken the foremost rank among the friends and benefactors of the Mercantile Library Association."

The personal qualities of Mr. Bacon are eminently fitted to conciliate friendship, and enlarge the circle of his personal friends; and whether transacting the business of his banking-house, or extending the hospitalities of his elegant mansion, his gentlemanly courtesy, amenity of manners, frankness and ease, are felt and acknowledged.

May his future career advance even brighter than the past, and may a good old age, with its honors and its rewards, crown the efforts of a well-spent and useful life.

EDITORIAL AND LITERARY DEPARTMENT.

1.—*Hernando de Soto.*—The following is from the Prairie Star, published at Marksville, Avoyelles parish:

Since we have been in this place we have made a visit to Old River, situated about one mile back of Marksville. Much has been said about the curious and apparently military works, the sign of which seems designed to remain as long as the world stands. We will first attempt a description, before we presume an opinion.

The banks of what doubtless was once Red River, is about seventeen feet higher than the highest water marks ever known by the oldest inhabitants. Immediately upon the bank is situated a large mound, about twenty feet high, forming a level of about an acre on the top; from this, or rather from the base of it, commences apparently a breastwork, of one mile in extent, forming a complete semi-circle, uniformly eight feet in height, with a complete circumvallation the whole extent, with a slight interruption, however, of what appears to have been planted a battery for the use of the cannon.

Immediately in the rear of this battery is situated a small mound, forty feet high, as though it was intended as a kind of look-out. Back of this, still, is another, built in the form of the Pyramid of Cholula, a double mound, one upon the other, diminishing in size to the top. Some years since the Hon. P. Soule and Judge Preston visited these ruins, and the opinion of the former was that they presented the appearance of European works. If we bear in mind the fact that this is the first high land not subject to overflow, after leaving the mouth of Red River, we are irresistibly led to the conclusion that it formed the camping-ground of Hernando de Soto; still the timber in some places appears to be quite ancient—some measuring six feet in diameter.

2.—STATISTICS OF THE TUSCALOOSA MANUFACTURING CO'S MILLS.

SCOTTSVILLE, *Ala.*, *April* 2, 1852.

To J. D. B. DE BOW, ESQ.:

1 brick cotton mill, 45 by 90 feet, 3 stories, with basement and garret, with a wing attached, 33 by 43 feet, 4 stories.

1 willow; 2 lapping machines; 30 cotton cards, 30 inches; 3 drawing frames; 4 speeders; 12 spinning frames,

	1536	spindles.
1 pair of hand mules,	480	"
1 twine machine,	20	"
	2036	
	120	wool mule below.

4 reels; 3 dressing frames; 1 spooling machine; 2 warpers; 1 pair of wool cards, for rolls, will card 160 or 170 lbs. per day; 1 set of do. for manufacturing wool; 1 wool mule, 120 spindles; 45 looms, for 4-4 goods, about 30 running.

We employ about 90 operatives.

We manufacture daily about 1500 yards Osnaburgs = per annum, 450,000 yards, 31 inches wide, weighing 8 ozs. per yard; 650 to 700 yds. cotton yarn = an., 100,000 lbs.; 11 to 1200 lbs. cotton = 350 to 360,000 lbs. = 700 bales. About 12,000 yards heavy linseys yearly; also, a quantity of twine and sewing cotton. We have a grist and saw mill, a church 35 by 50 feet. The water wheel is 13 feet diameter, and 8 feet long overshot. Our head and fall of water 18 feet, with an abundant supply at all times, and not subject to inundation. Our profits for the last two years were quite light, but no loss. We generally declare 10 p. ct., dividend; one year, 15 p. ct. A population of about 200. The Company own all the property.

LATE PUBLICATIONS.

1.—*Arctic Searching Expedition:* a Journal of a Boat-voyage through Rupert's Land and the Arctic Sea, in search of the discovery ships under command of Sir John Franklin. With an Appendix on the Physical Geography of North America. By Sir John Richardson, C. B., F. R. S., Inspector of Naval Hospitals and Fleets, etc. New-York: Harper & Brothers, 1852. J. C. Morgan, New-Orleans.

We are preparing an elaborate review of this most interesting work, which will appear in our next number.

2.—*Literary World.* New-York—$3 per annum: E. A. & G. Duyckinck.

This popular journal, the first and only one of its kind successfully established in the United States, is especially devoted to the interests of the reading public.

Its leaders embrace all subjects of general interest, handled in an independent style.

Its tales and sketches are by the best writers of our own country, or selected from choice foreign sources not generally accessible.

Its chronicle of passing events is full and minute on all topics likely to interest the intelligent, embracing the latest information on all subjects of literature, science, art, music, drama, popular amusement, and social chit-chat.

Its literary notices aim at combining entertainment and piquancy, with the fullest and fairest exposition of *every new book of value published.*

The proceedings of the various societies for discovery or research throughout the country are regularly reported in its columns.

It contains every week lists of all books published in this country, and a descriptive catalogue of valuable works published abroad and not reprinted here. This information cannot be obtained in any other single publication, and its value to all readers need not be dwelt upon.

Its constant contributors are some of the most eminent authors of the country.

It is the aim of its conductors to issue a weekly journal inferior to none in America in enlightened entertainment and efficiency.

3.—*The Life and Works of Robert Burns,* edited by Robert Chambers, in 4 volumes. New-York: Harper & Brothers. J. C. Morgan, New-Orleans, 1852.

We have received vol. I., which is neatly issued, and contains the Life of the poet, together with his Correspondence and Poems, written up to 1786. In the appendix there are several interesting papers, among others, an account of his ancestry, and the books read by him in early life. As the other volumes appear we shall give them a notice which will be worthy of the great merits of the Scottish bard. Mr. Chambers' edition of this work must meet with universal favor.

4.—*Rational Religion and Morals;* presenting an Analysis of the Functions of the Mind under the operations and directions of Reason, etc., etc. By Thomas J. Vaiden, M. D., of St. Louis, Mo.

We are indebted to J. B. Steel for this ponderous volume of one thousand pages of small type! It embraces a systematic attack upon revelation, the Bible, etc., and indeed upon all religious creeds and beliefs except that which is founded upon Reason, as the author expresses it. There is evidently a screw loose somewhere in the mind of this voluminous writer; but it may confidently be affirmed of his book, whatever its infidel *intentions,* it is entirely incapable of doing any harm! If any one succeeds in reading a whole page of it through, his success will be greater than ours, after several attempts. Such a waste of labor and ink, and good paper, is without a parallel. "In short, we can make neither head nor tail of it," and

have no idea that any one else will be more fortunate. The author dedicates it "to the citizens of the world—those of the Billion, inspired by Reason and Truth," etc., and we leave it in their hands for what they can make of it.

5.—*Alabama Historical Society.*—We have received the first number of the Transactions of this association, which contains the proceedings of the first meeting; the Report of Executive Committee; the Address of the President; Report of Committee on the Statistics of Tuscaloosa; Col. Croom's Essay on the Cotton Plant. The officers of the society are—

Hon. ALEX. BOWIE, *President.*
Col. A. J. PICKETT, Gen. E. D. KING, } *Vice Pres't.*
Hon. W. MOODY, *Treasurer.*
J. H. FOSTER, *Secretary.*

6—*Report of the Secretary of War:* Communicating Reports of Col. Long and Mr. Ellet, relating to the inundations of the Mississippi River. This is an interesting work, with maps, and will be noticed by us more fully hereafter, though Mr. Ellet's report has been already largely reviewed in our pages by our able friend, Albert Stein, of Mobile.

7.—*Medical Department of the University of Nashville.*—We call attention to the advertisement of this institution in another place. The total number of students in 1851, '52, is 121.

8.—*Riego; or, the Spanish Martyr.* A Tragedy in five acts. Published by P. D. Bernard, Richmond, Va. We apologize to the author, who was good enough to send us a copy, for not having noticed it before. We have still to postpone the duty to another number of the Review.

9.—*School for Husbands.* A Novel. By Lady Bulwer Lytton. Three volumes in one. Carey & Hart, 1852.

We thank J. B. Steel, New-Orleans, for a copy of this ingenious, but, as usual, rather spiteful novel of Lady Bulwer. She has a long preface, filled up with personal matters, in which the public are ever disposed to take an interest, where the quarrels of high life are concerned.

10.—*Report of the Charity Hospital of New-Orleans.*—This able document is the production of Dr. E. D. Fenner. We extract from it some statistics, showing the enormous operations of the Institution.

It will appear from the accompanying document, that, in the year 1850,

The number of patients admitted was	18,476
Do. do. discharged,	15,989
Do. do. died	1,884
The cost of maintenance of the Hospital for the year 1850 was	$69,783 87
Whilst the payment and expenditure amounted to	89,427 56
The gross income for this year, including the state appropriation, was	84,711 42
The debts due by the Hospital, 31st December, 1850	22,380 82
The debts due to the Hospital	14,570 14
Number of patients from foreign countries	16,598
Do. do. United States.	1,774
Do. do. unknown	104
Together	18,476
Of which number there were from the State of Louisiana	264
For the year 1851—	
Number of patients admitted	18,420
Do. do. discharged.	16,777
Do. do. died	1,871
The cost of maintenance was	$67,074 48
Payments and expenditures during the year	66,575 70
The gross income for the year, including the state appropriation, was	66,504 91
Debts due by the Hospital	23,853 45
Debts due to the Hospital	16,169 28

Of this last amount, nearly three-fourths are considered unavailable, leaving the indebtedness of the Hospital about $20,000 at this time.

The number of patients from foreign countries	16,503
Do. do. United States.	1,726
Do. do. unknown	291
Together	18,420
Of which number there were from Louisiana only	241

11.—*The Isthmus of Tehuantepec.* Being the results of a Survey for a Rail-Road to connect the Atlantic and Pacific Oceans, made by the Scientific Commission under the direction of Major J. G. Barnard, U. S. Engineers. With a Resume of the Geology, Local Topography, Climate, Productive Industry, Fauna and Flora, of that region. Illustrated with numerous maps and engravings. Arranged and prepared for the Company, by J. J. Williams, Assistant Engineer. New-York: D. Appleton & Co.

This work, in two handsome volumes, the

latter containing maps, &c. may be had at the bookstores, and is one of the most interesting productions of the day. When a little more at leisure, we design to make them the basis of an article.

12.—*Randolph-Macon Magazine*, published by the students of that college in Virginia. A neat monthly periodical, with many interesting essays and sketches. It has reached the second number of the second volume. We like to see such efforts in all of the literary institutions of the South.

13.—*Southern Literary Messenger* for March, 1852. Richmond, Va.: R. Thompson. $3 per annum. Contents—Voyage to China; The Fall of Bexar; Short Sermons; History of Richmond; Shadows of the Mountains' Pine; Poetry of Judge Henry Jackson; Queen Victoria; original poems, Ponce de Leon's Dream; The Madonna, Della Guardia; Sonnet; Lola Montes Unseen, &c.

14.—*Banker's Magazine, Boston:* J. Smith Homans. Five dollars per annum. Contents—Prize Essay on Banking; History of Banking; Natural Formation of Gold; Gold of California; Catalogue of rare and useful books on Banking; Bank statistics of the different states, etc. etc.

15.—*Astronomical Observations*, made under the direction of Lieut. M. F. Maury, at the National Observatory, Washington. Vol. II.

We are indebted for a copy of this large quarto volume to the courtesy of the author, and did time admit, should be pleased to open to our readers much of the valuable matter it embodies. Independently of the mere tables, which involve a prodigious amount of labor, there are over a hundred pages upon the subject of the Electro-Chronograph, the Planet Neptune, and Wind and Current Charts. These are matters of great interest and importance to navigators, as well as to men of science. No man in the United States is doing more for the sea interests than Lieut. Maury, and the South has no son more ardently devoted to her advancement, as the pages of our own Review have shown.

16.—*The Head of the Family*—a novel, by the author of "Olive," and "The Ogilvies." This is number 167 of Harpers' admirable library of select novels, which is a sufficient assurance of its excellence and readable qualities. It is dedicated to a lady—Elizabeth Barrett Browning—and is written in the usual simple, clear and vigorous style of its author.

17.—*Ravenscliffe*—a novel, by Mrs. Marsh, the well-known author of "Two Old Men's Tales," "Mordaunt Hall," &c. &c. This is a novel of high merit, and well deserving of the place it occupies in Harpers' Select Library. It is now too late to praise it, as it is well known. Like all of Harpers' select novels, it is published unabridged and unaltered.

18.—*Darien, or the Merchant Prince:* An Historical Romance, by Elliot Warburton, author of "The Crescent and the Cross," "Prince Rupert and the Cavaliers," "Reginald Hastings," &c. New-York: Harpers. Morgan: New-Orleans.

19.—*American Statistical Society.*—We have received the constitution, etc. of this important association, which has lately been formed in New-York, and of which Henry Grinnell is President, and Charles A. Dana, and S. Dewitt Bloodgood, Secretaries. An initiation fee of $10, and $5 per annum, will constitute a member. There are anniversary, special and ordinary meetings—the latter taking place regularly once a quarter. A library is to be collected, and regular publications made. We give the right hand of fellowship to this movement, in whose success are our best wishes.

EDITORIAL NOTE.

The continued indisposition of the Editor for several weeks, will be an apology for the deficiency of editorial matter in the present number. He has been compelled to lay over for another number several papers upon subjects of present interest and importance, which he much regrets. In the next number an effort will be made to make amends for past delinquencies, and to bring up all subjects to date.

THE LATE SOUTHWESTERN RAIL-ROAD CONVENTION.

The proceedings of this important body have been reprinted from the Review, in pamphlet form, and are ready for *free* distribution. Persons desiring copies will give notice to the office of the Review, *post-paid.*

DEAN COTTON SEED.

We have on hand a small parcel of this cotton seed, which was noticed in our March number, and attracted considerable attention. Any of our friends may have them by making the request. We understand from Mr. Dean that he will be able to supply these seeds in large quantities, for the next crop. The fact will be noticed, in due season, in the Review.

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See the March number of De Bow's Review, and for other particulars address W. F. Wilkins, Engineer, Opelousas; or Simon Richard, Opelousas, who manufactures the Pneumatical part of the Kettle; or Messrs. Holtabury & Fowler, Boiler makers, Barrone-street, New-Orleans, who construct the Kettles.

A. KENDALL & CO.,

72 Magazine-street, New-Orleans.

The attention of the reader is called to some recent frauds perpetrated on parties who have mistakingly purchased, as the genuine article, imitations of the "Electrical Febrifuge," prepared by A. Kendall & Co., 72 Magazine-street, New-Orleans. Now, this valuable medicine, when purchased properly, has been found, it is said, a most valuable remedy in cases of bilious fever—there is quite a mass of testimony to that effect in letters received, apparently without solicitation, from various planters of the highest respectability. Many of these gentlemen state, that the fever patients were cured in from two to eight hours.

LATE PUBLICATIONS.

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The Latest Publications Received.

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Wesley and Methodism. By Isaac Taylor. 1 vol. 12mo.

Practical Treatise on Use of the Microscope. 1 vol. 8vo.

Illustrated Manual of the Operative Surgery and Surgical Anatomy.

Calhoun's Works—A Disquisition on Government and a Discourse on the Constitution of the United States. By John C. Calhoun. Vol. 1.

Sorcery and Magic. By Thomas Wright.

Layard's Nineveh, cheap edition. 1 vol. 12mo.

Sweet on Diseases of the Chest. 1 vol. 8vo.

Characters in the Gospels, Illustrating phases of character at the present day. By Rev. E. H. Chapin. 1 vol. 12mo.

The New French Manual—intended as a guide to the Tourist, and a class-book for the Student. By Surenne.

Home and Social Philosophy. By Charles Dickens.

Norton's Literary Almanac for 1852.

The Corner Stone. By Jacob Abbott, forming vol. 2 of Abbott's Young Christian Series.

Whimsicalities. By Thomas Hood. 1 vol. 12mo.

Quakerism, or the Story of my Life. By a Lady who for forty years was a member of the Society of Friends.

Templeton's Engineers', Millwrights' and Mechanics' Pocket Companion. By Julius W. Adams, Engineer.

Clover Nook; or Recollections of our Neighborhood in the West. By Alice Carey.

Appleton's Mechanics' Magazine and Engineers' Journal for 1851. Bound in 1 vol.

Treatises on Architecture, Building, Masonry, Joinery, and Carpentry. By Wm. Hosking.

Byrne's Practical Metal Worker's Assistant.

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NOVELS AND MAGAZINES.

Florence Sacville. By Mrs. Burbury.

Sketches in France. By Alexandre Dumas.

Yankee Yarns and Yankee Letters. By Judge Halliburton.

Kenneth, a Romance of the Highlands. By G. W. M. Reynolds. Complete in 2 vols.

Harper's Magazine for March and April.

International	do.	do.
Eclectic	do.	do.
Knickerbocker	do.	do.
Hunt's Merchants	do.	do.
Blackwood's	do.	Feb. and March
Graham's	do.	March and April.
Sartain's	do.	do.
Godey's Lady's Book		do.

Appleton's Mechanics Magazine for March.

London Lancet do.

London Art Journal do.

Silliman's Journal of Science and Art for March.

London Quarterly, North British, Westminster and Edinburg Reviews.

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The Second Annual Course of Lectures in this department will commence on the first Monday of November next, and continue till the first of the ensuing March.

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March, 1852.

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